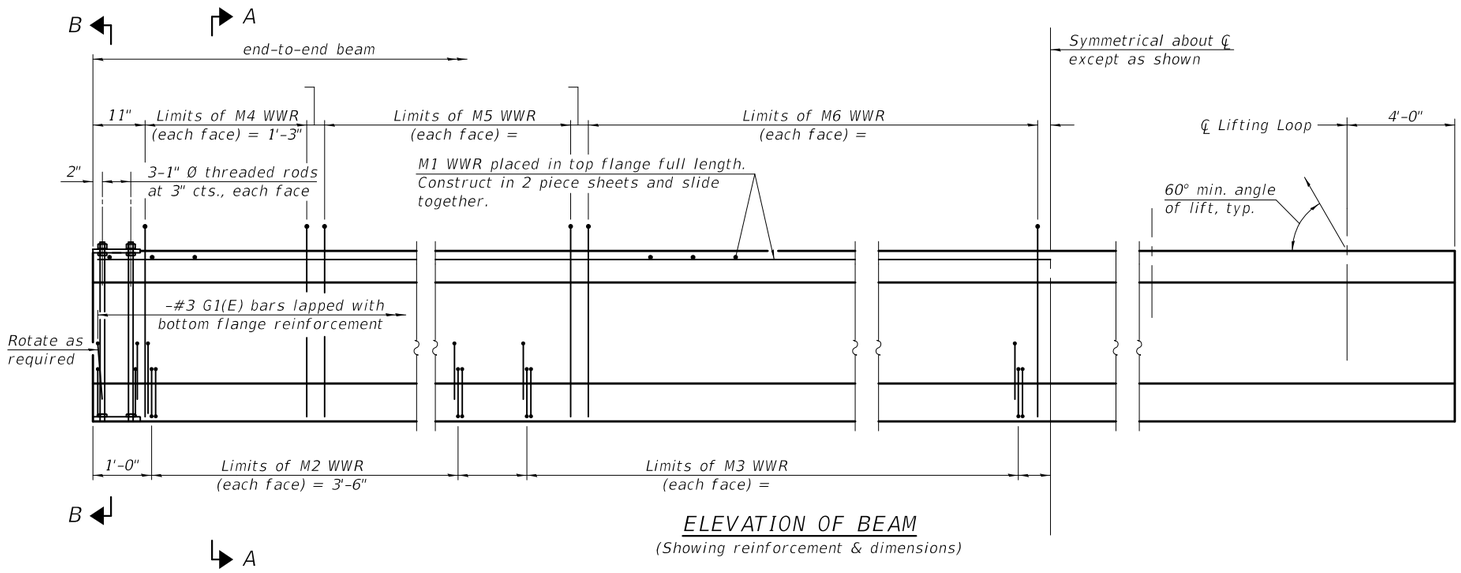
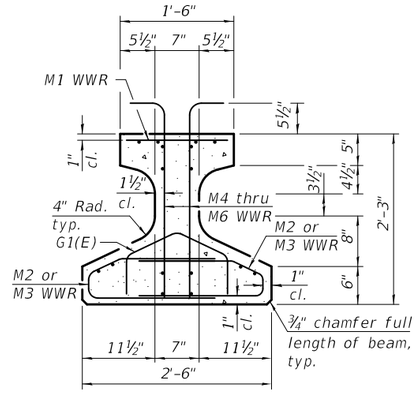
| CELL / MODEL NAME | DESCRIPTION | DATE |
|---|---|---|
| IL27-1830 | 27" Prestressed I-Bm. - 18" & 30" Flanges | 2/17/2017 |
| IL27-1830D | 27" Prestressed I-Bm. - 18" & 30" Flanges - Detail Sheet | 2/17/2017 |
| IL36-2438 | 36" Prestressed I-Bm. - 24" & 38" Flanges | 2/17/2017 |
| IL36-2438D | 36" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet | 2/17/2017 |
| IL36-3838 | 36" Prestressed I-Bm. - 38" Flanges | 2/17/2017 |
| IL36-3838D | 36" Prestressed I-Bm. - 38" Flanges - Detail Sheet | 2/17/2017 |
| IL45-2438 | 45" Prestressed I-Bm. - 24" & 38" Flanges | 2/17/2017 |
| IL45-2438D | 45" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet | 2/17/2017 |
| IL45-3838 | 45" Prestressed I-Bm. - 38" Flanges | 2/17/2017 |
| IL45-3838D | 45" Prestressed I-Bm. - 38" Flanges - Detail Sheet | 2/17/2017 |
| IL54-2438 | 54" Prestressed I-Bm. - 24" & 38" Flanges | 2/17/2017 |
| IL54-2438D | 54" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet | 2/17/2017 |
| IL54-3838 | 54" Prestressed I-Bm. - 38" Flanges | 2/17/2017 |
| IL54-3838D | 54" Prestressed I-Bm. - 38" Flanges - Detail Sheet | 2/17/2017 |
| IL63-2438 | 63" Prestressed I-Bm. - 24" & 38" Flanges | 2/17/2017 |
| IL63-2438D | 63" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet | 2/17/2017 |
| IL63-3838 | 63" Prestressed I-Bm. - 38" Flanges | 2/17/2017 |
| IL63-3838D | 63" Prestressed I-Bm. - 38" Flanges - Detail Sheet | 2/17/2017 |
| IL72-2438 | 72" Prestressed I-Bm. - 24" & 38" Flanges | 2/17/2017 |
| IL72-2438D | 72" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet | 2/17/2017 |
| IL72-3838 | 72" Prestressed I-Bm. - 38" Flanges | 2/17/2017 |
| IL72-3838D | 72" Prestressed I-Bm. - 38" Flanges - Detail Sheet | 2/17/2017 |
| PBT-4-63 | 63 inch PPC bulb T beam | 2/17/2017 |
| PBT-4-63D | 63 inch PPC bulb T beam details | 2/17/2017 |
| PBT-4-72 | 72 inch PPC bulb T beam | 2/17/2017 |
| PBT-4-72D | 72 inch PPC bulb T beam details | 2/17/2017 |
| PI-4-36 | 36 inch PPC I beam | 2/17/2017 |
| PI-4-36D | 36 inch PPC I beam details | 2/17/2017 |
| PI-4-42 | 42 inch PPC I beam | 2/17/2017 |
| PI-4-42D | 42 inch PPC I beam details | 2/17/2017 |
| PI-4-48 | 48 inch PPC I beam | 2/17/2017 |
| PI-4-48D | 48 inch PPC I beam details | 2/17/2017 |
| PI-4-54 | 54 inch PPC I beam | 2/17/2017 |

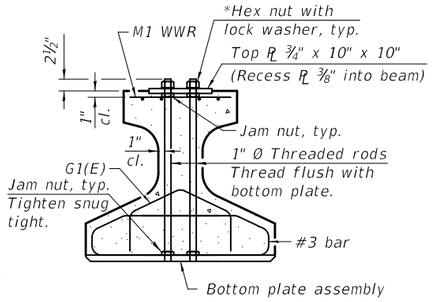
| CELL / MODEL NAME | DESCRIPTION | DATE |
|---|---|---|
| PI-4-54D | 54 inch PPC I beam details | 2/17/2017 |



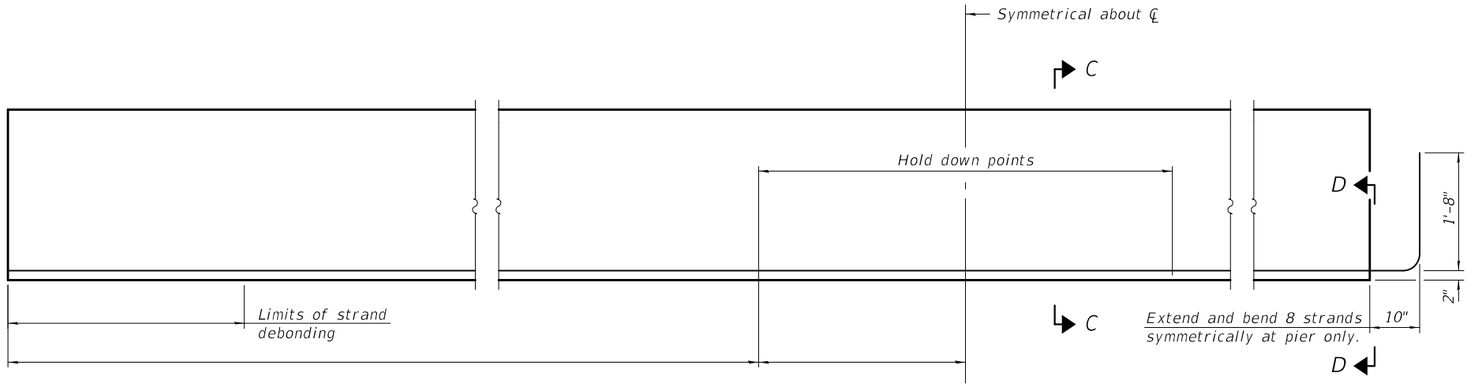

## ELEVATION OF BEAM
(Showing reinforcement & dimensions)



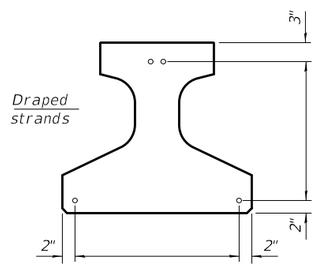

## SECTION A-A



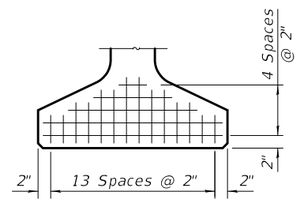

## SECTION B-B
*Only tighten sufficiently to compress lock washers




## ELEVATION OF BEAM
(Showing prestressing steel)




## SECTION C-C
(__-0.6" Ø 270 ksi strands)




## VIEW D-D
○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

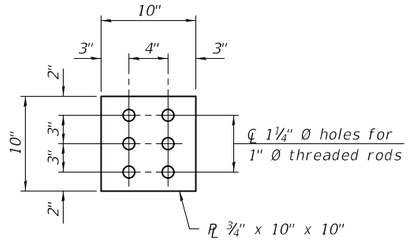
IL27-1830 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

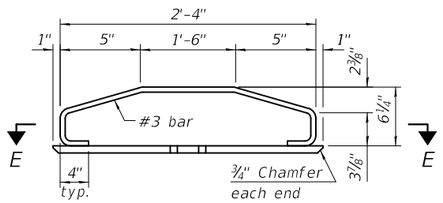
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL27N BEAM**
**STRUCTURE NO.**

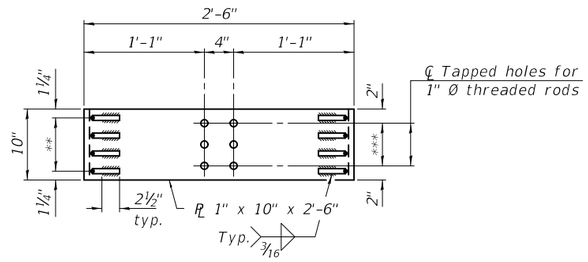
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN – TOP PLATE



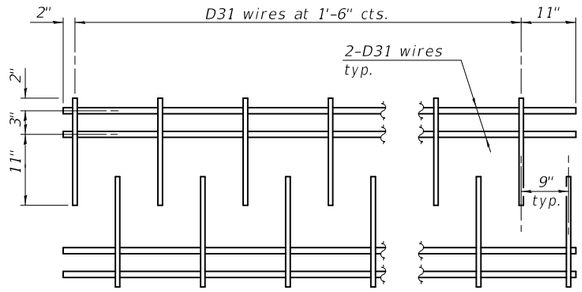

ELEVATION – BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"




M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Bend the extended strands inward on the fascia beams to maintain 1½" clearance inside the pier diaphragm.

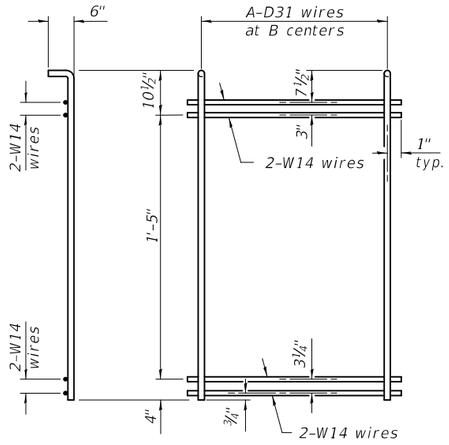
The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




M4 THRU M6 WWR DETAIL

(See Table of Dimensions)

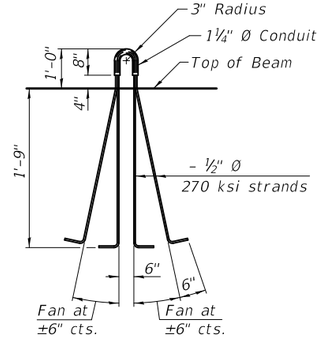
## TABLE OF DIMENSIONS

SPAN

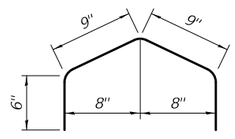
| WWR | A | B |
|---|---|---|
| M2 | 15 | 3" |
| M3 | – | 1'-6" |
| M4 | 6 | 3" |
| M5 | – | 6" |
| M6 | – | 1'-0" |

SPAN

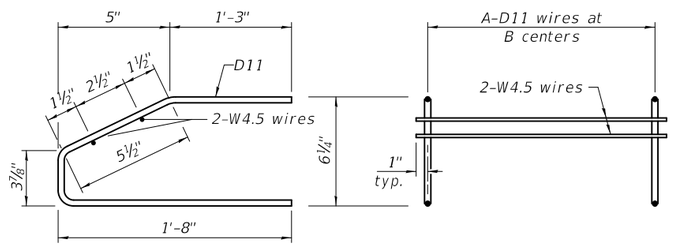
| WWR | A | B |
|---|---|---|
| M2 | 15 | 3" |
| M3 | – | 1'-6" |
| M4 | 6 | 3" |
| M5 | – | 6" |
| M6 | – | 1'-0" |




LIFTING LOOP DETAIL




BAR G1(E)




M2 AND M3 WWR DETAIL

(See Table of Dimensions)

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL27N | Ft. | |

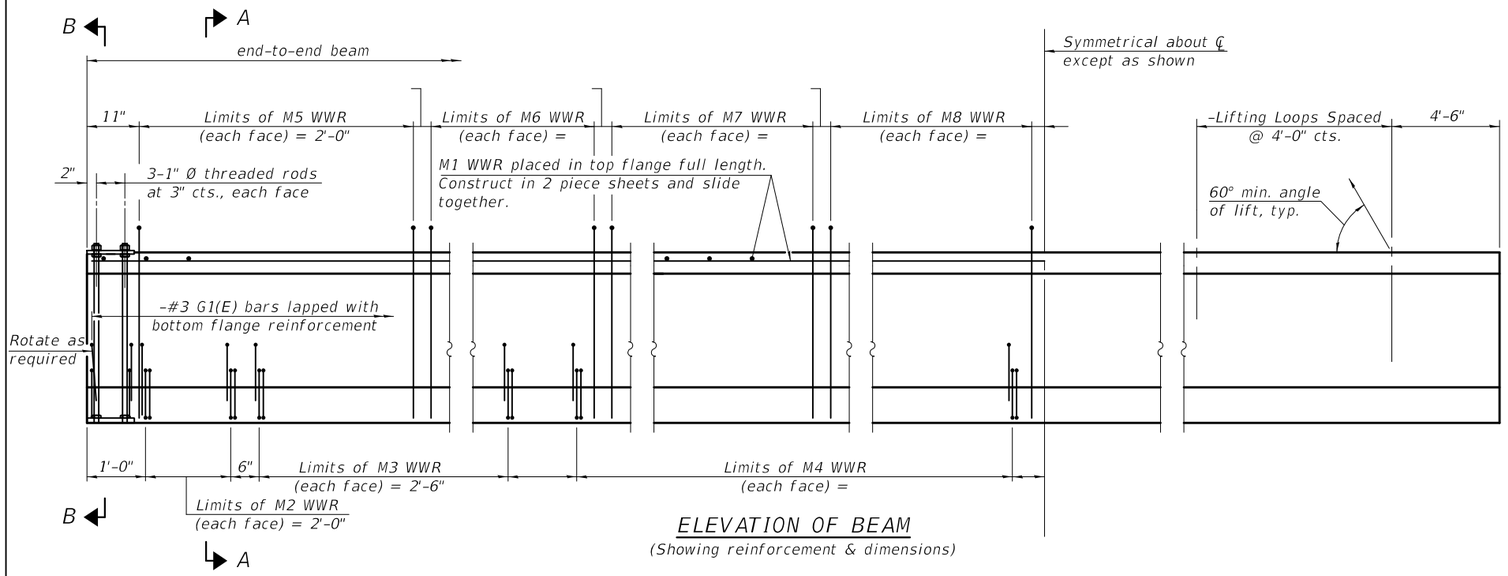
IL27-1830D 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

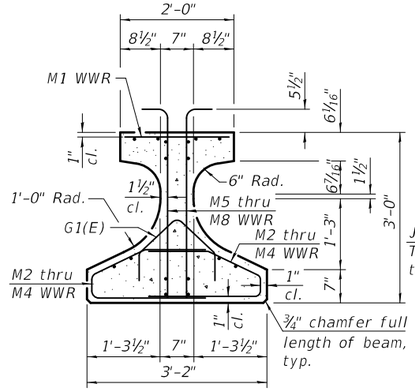
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL27N BEAM DETAILS**
**STRUCTURE NO.**

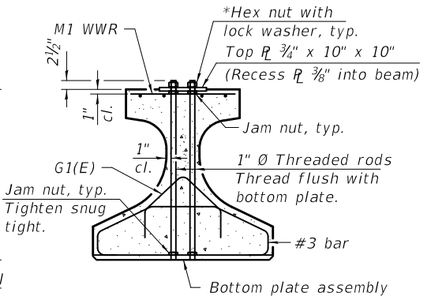
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |



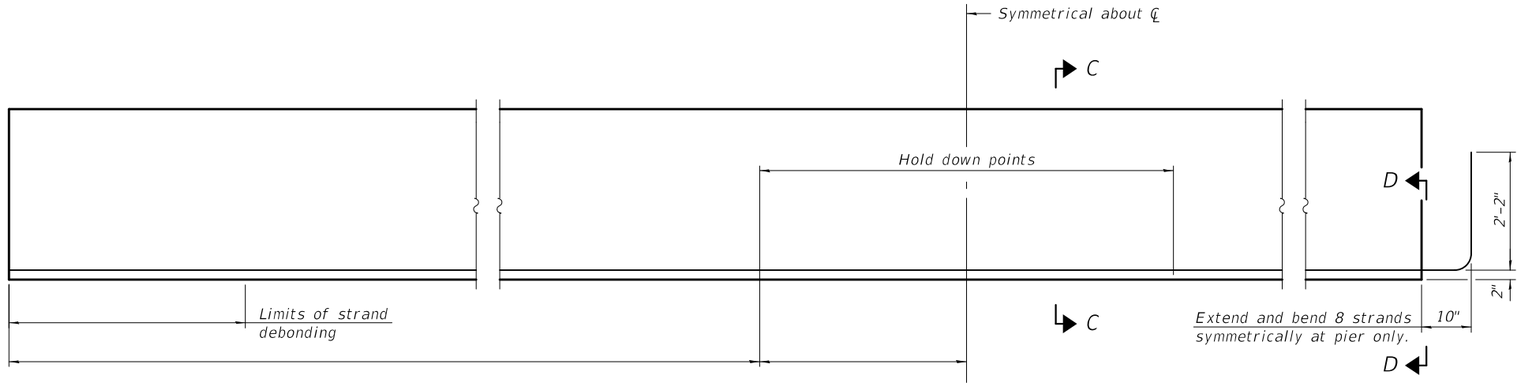

ELEVATION OF BEAM
(Showing reinforcement & dimensions)



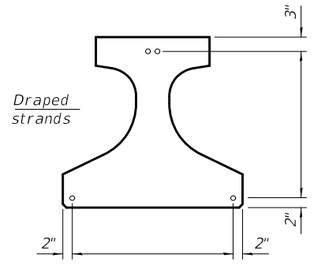

SECTION A-A



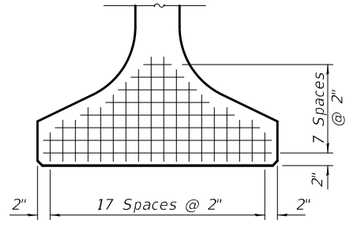

SECTION B-B
*Only tighten sufficiently to compress lock washers




ELEVATION OF BEAM
(Showing prestressing steel)




SECTION C-C
(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

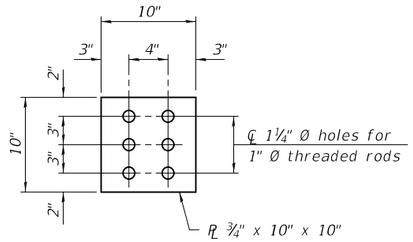
IL36-2438 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

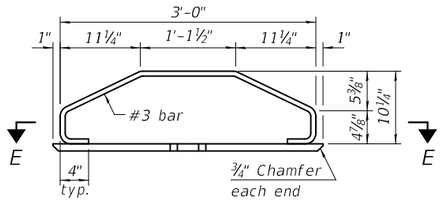
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL36N BEAM**
**STRUCTURE NO.**

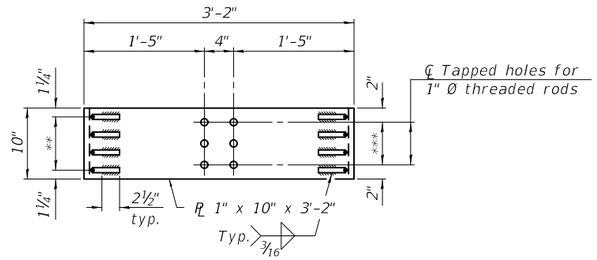
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN – TOP PLATE



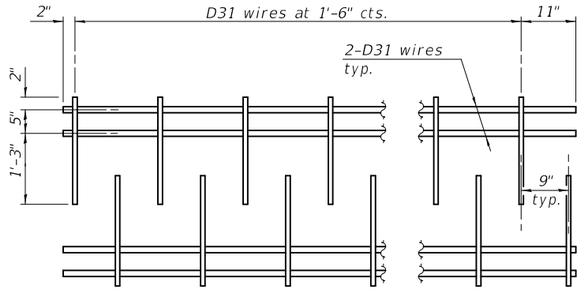

ELEVATION – BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"




M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Bend the extended strands inward on the fascia beams to maintain 1½" clearance inside the pier diaphragm.

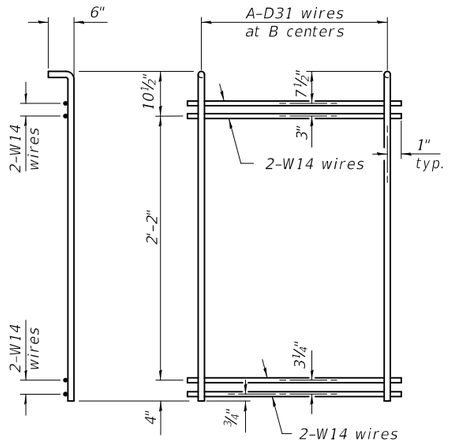
The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)

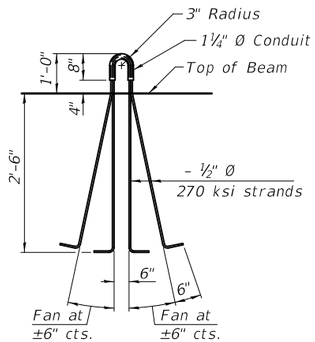
## TABLE OF DIMENSIONS

SPAN

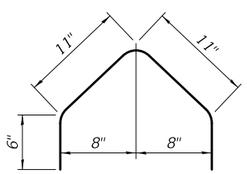
| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 6 | 6" |
| M4 | – | 1'-6" |
| M5 | 9 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

SPAN

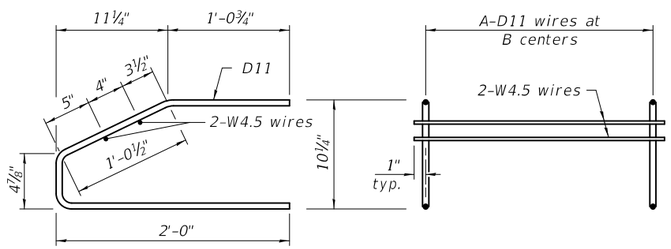
| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 6 | 6" |
| M4 | – | 1'-6" |
| M5 | 9 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |




LIFTING LOOP DETAIL




BAR G1(E)




M2 THRU M4 WWR DETAIL

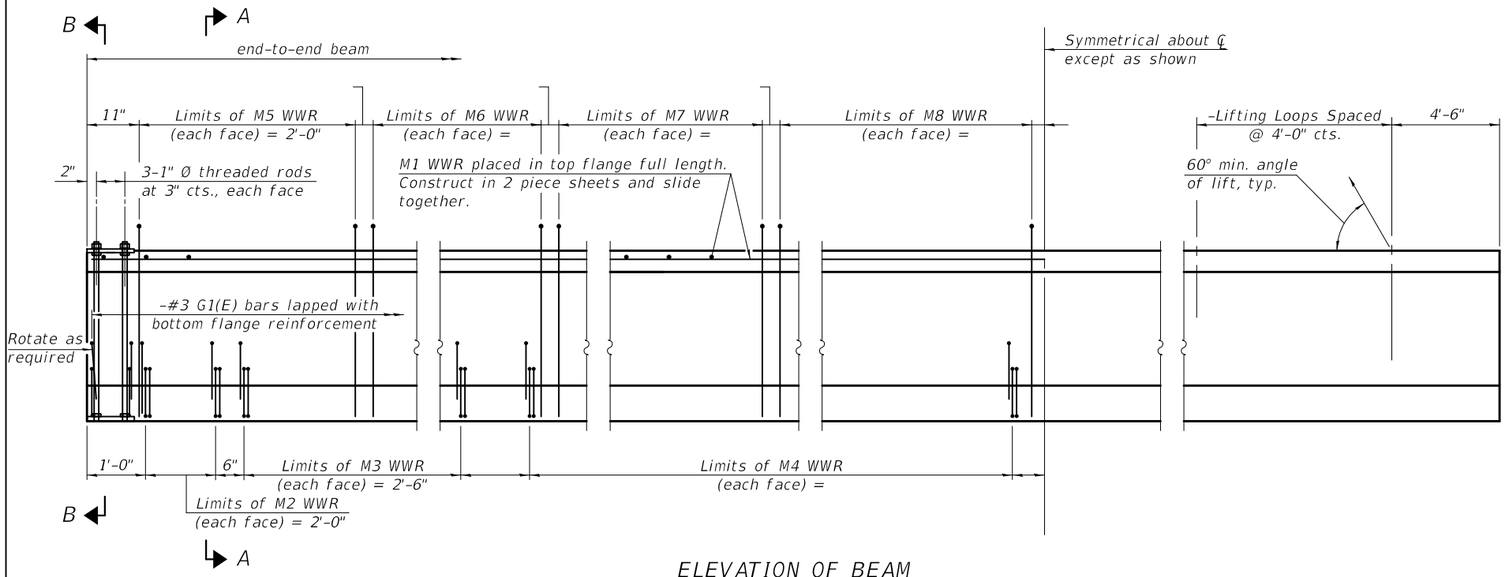
(See Table of Dimensions)

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL36N | Ft. | |

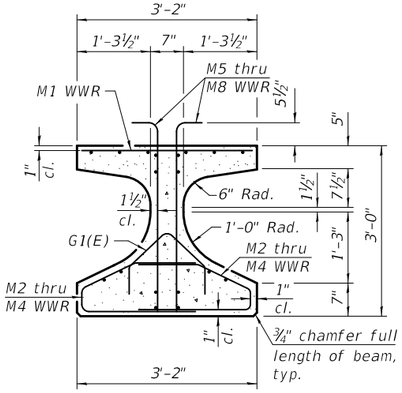
IL36-2438D 2-17-2017

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL36N BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | CONTRACT NO. |
| | PLOT DATE = | CHECKED - | REVISED - | | | | ILLINOIS FED. AID PROJECT |

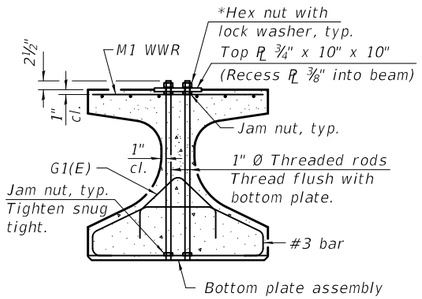



ELEVATION OF BEAM

(Showing reinforcement & dimensions)

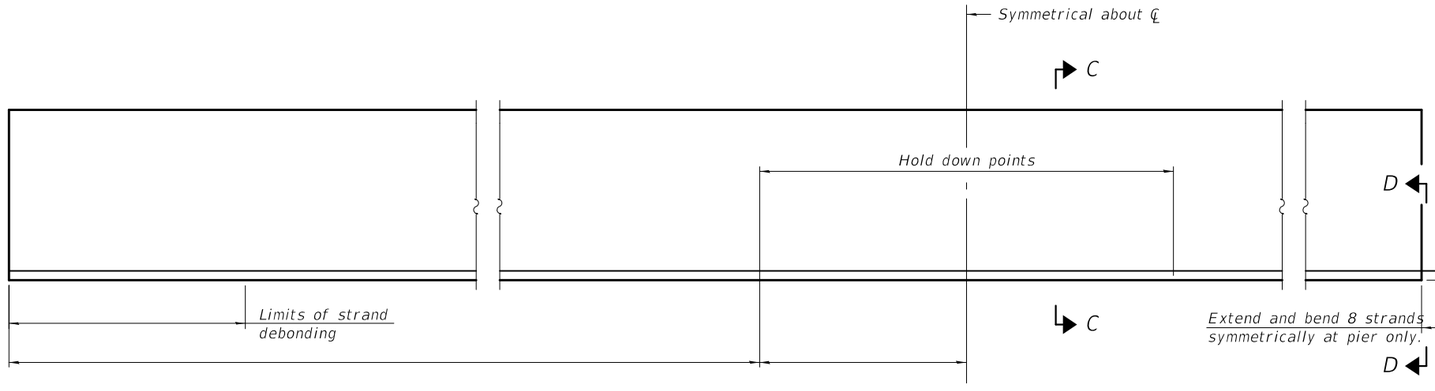



SECTION A-A



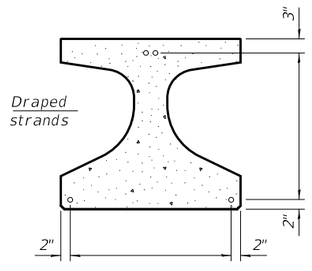

SECTION B-B

*Only tighten sufficiently to compress lock washers



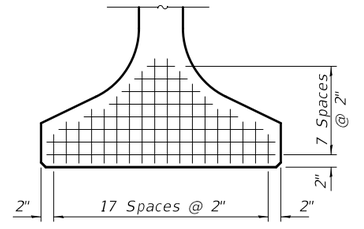

ELEVATION OF BEAM

(Showing prestressing steel)




SECTION C-C

(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

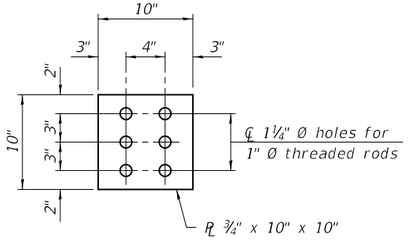
IL36-3838 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

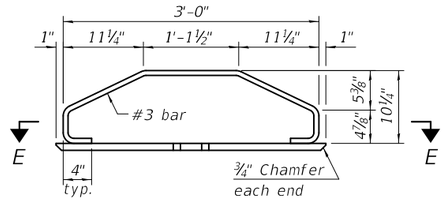
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL36 BEAM**
**STRUCTURE NO.**

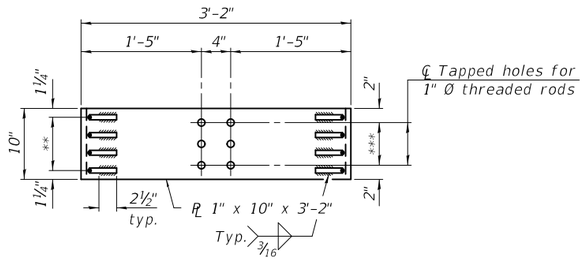
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS FED. AID PROJECT | | | |




PLAN – TOP PLATE



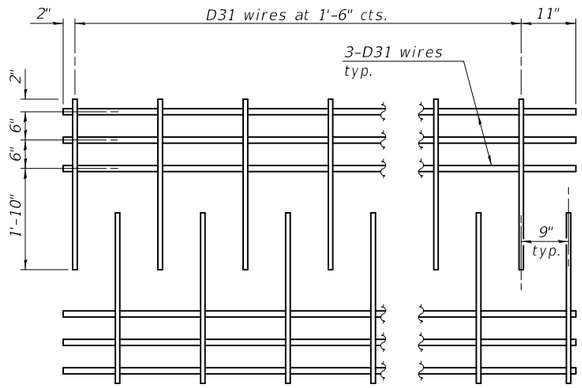

ELEVATION – BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"




M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Bend the extended strands inward on the fascia beams to maintain 1½" clearance inside the pier diaphragm.

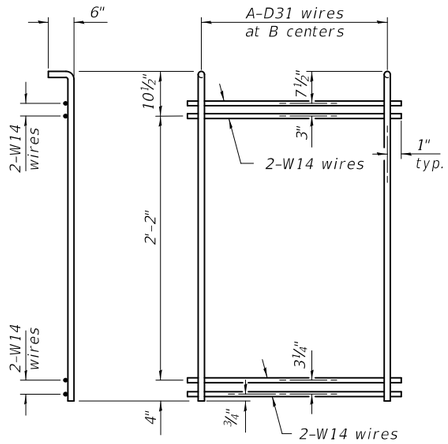
The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)

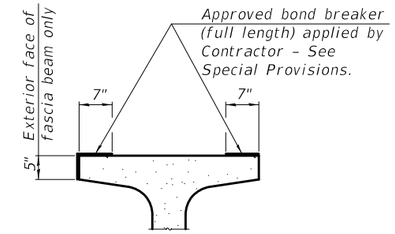
## TABLE OF DIMENSIONS

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 6 | 6" |
| M4 | – | 1'-6" |
| M5 | 9 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

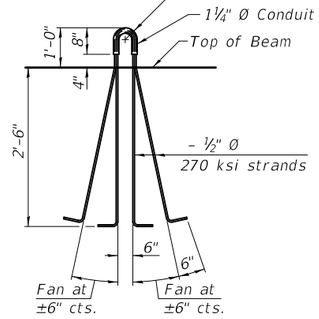
SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 6 | 6" |
| M4 | – | 1'-6" |
| M5 | 9 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

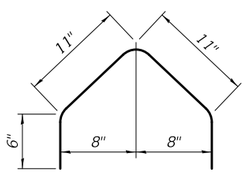



SECTION THRU TOP FLANGE

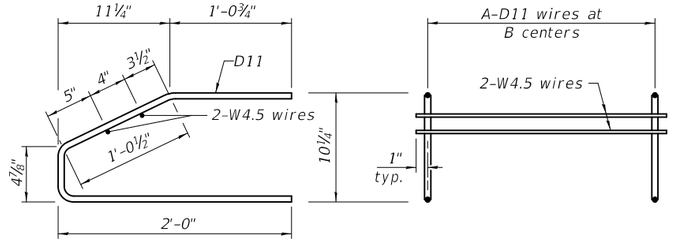
(Showing limits of bond breaker)




LIFTING LOOP DETAIL




BAR G1(E)




M2 THRU M4 WWR DETAIL

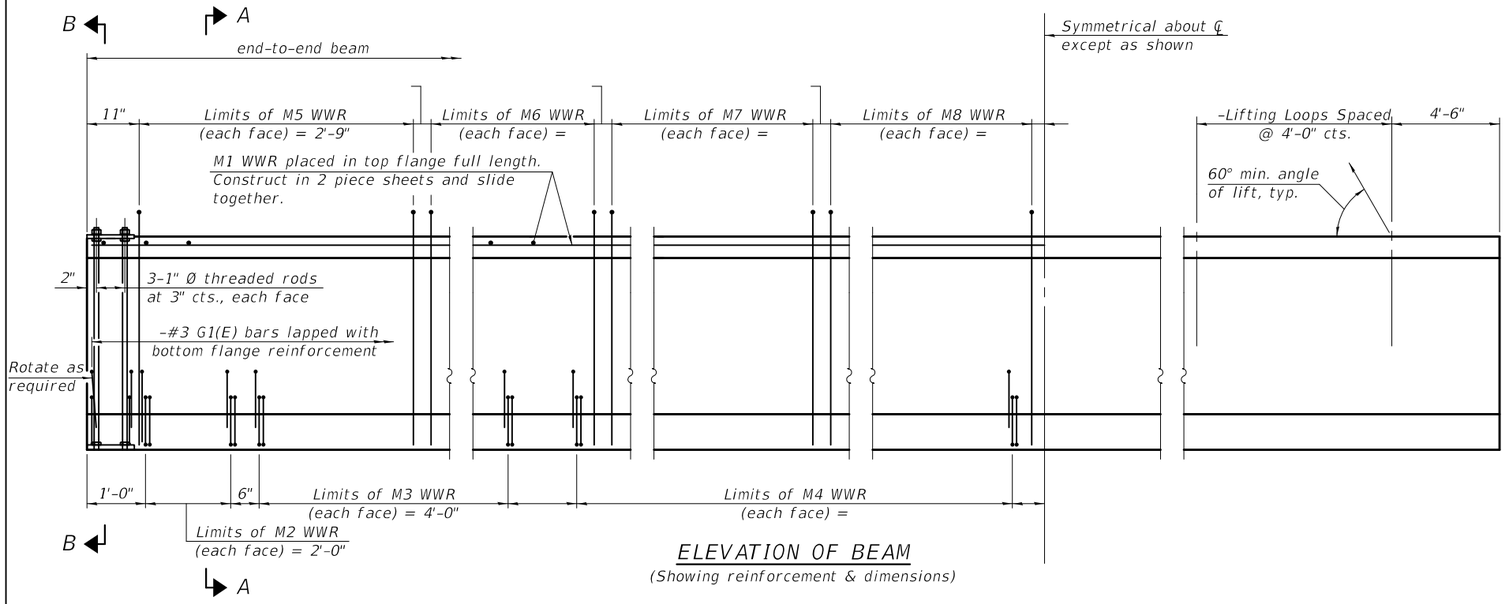
(See Table of Dimensions)

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL36 | Ft. | |

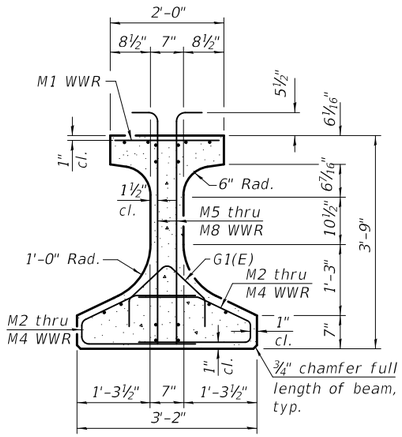
IL36-3838D 2-17-2017

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL36 BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | CONTRACT NO. |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | ILLINOIS FED. AID PROJECT |
| | PLOT DATE = | CHECKED - | REVISED - | | | | |

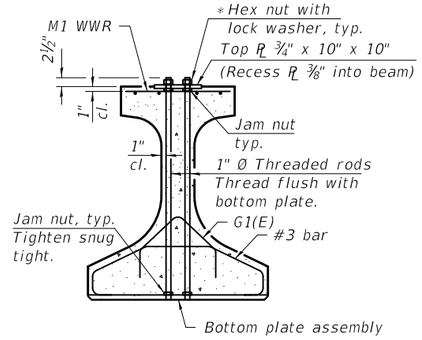



ELEVATION OF BEAM

(Showing reinforcement & dimensions)

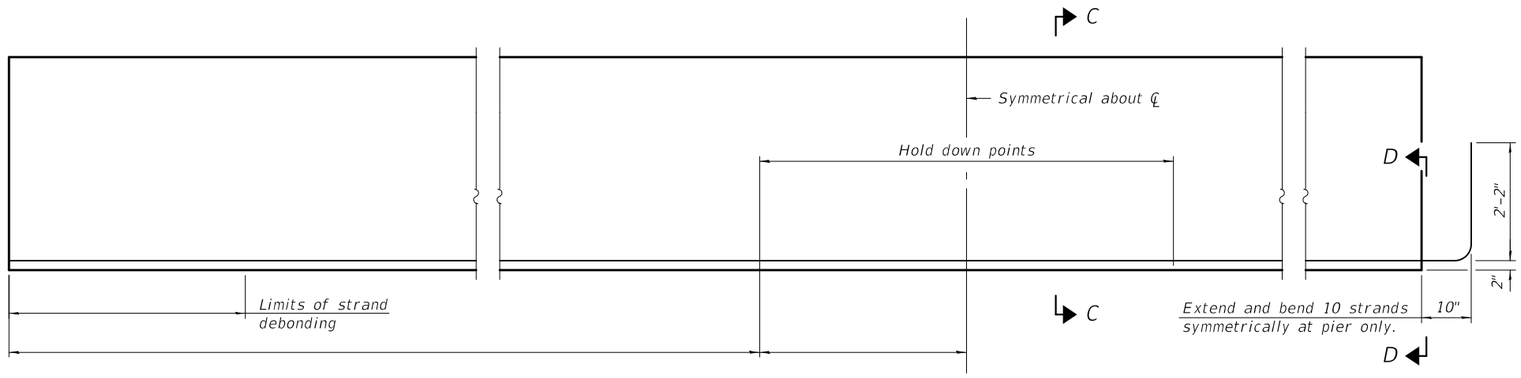



SECTION A-A



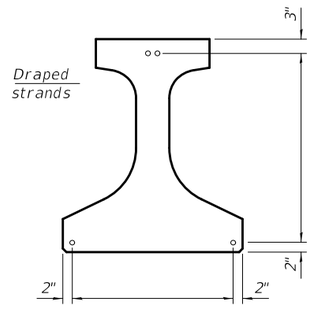

SECTION B-B

*Only tighten sufficiently to compress lock washers



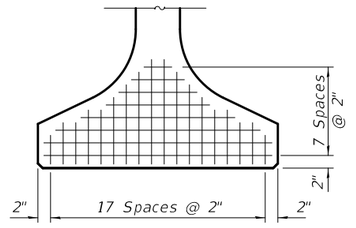

ELEVATION OF BEAM

(Showing prestressing steel)




SECTION C-C

(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

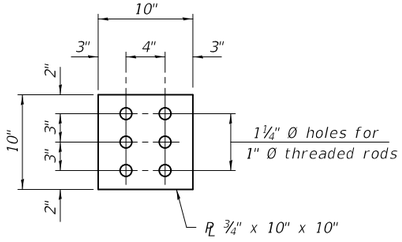
IL45-2438 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

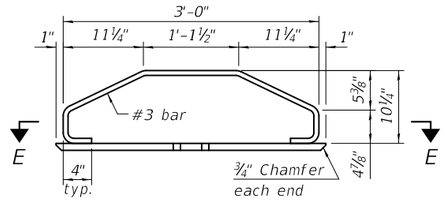
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL45N BEAM**
**STRUCTURE NO.**

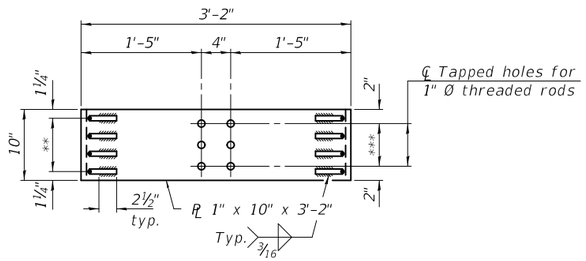
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN - TOP PLATE



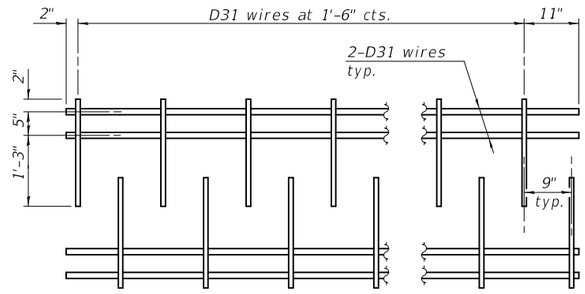

ELEVATION - BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"




M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

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Threaded rods shall be ASTM F 1554 Grade 55.

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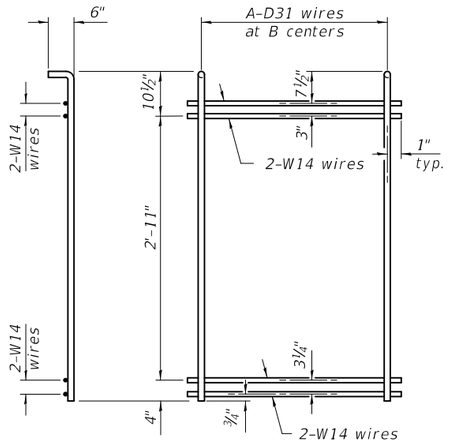
Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)

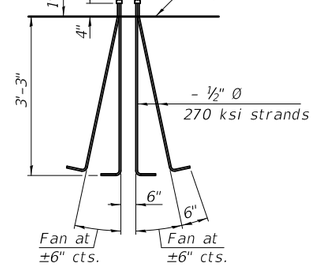
## TABLE OF DIMENSIONS

SPAN

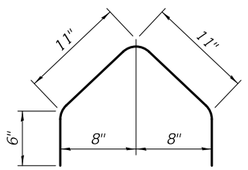
| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 9 | 6" |
| M4 | - | 1'-6" |
| M5 | 12 | 3" |
| M6 | - | 6" |
| M7 | - | 1'-0" |
| M8 | - | 2'-0" |

SPAN

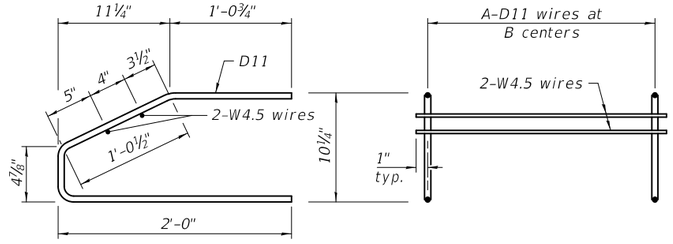
| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 9 | 6" |
| M4 | - | 1'-6" |
| M5 | 12 | 3" |
| M6 | - | 6" |
| M7 | - | 1'-0" |
| M8 | - | 2'-0" |




LIFTING LOOP DETAIL




BAR G1(E)




M2 THRU M4 WWR DETAIL

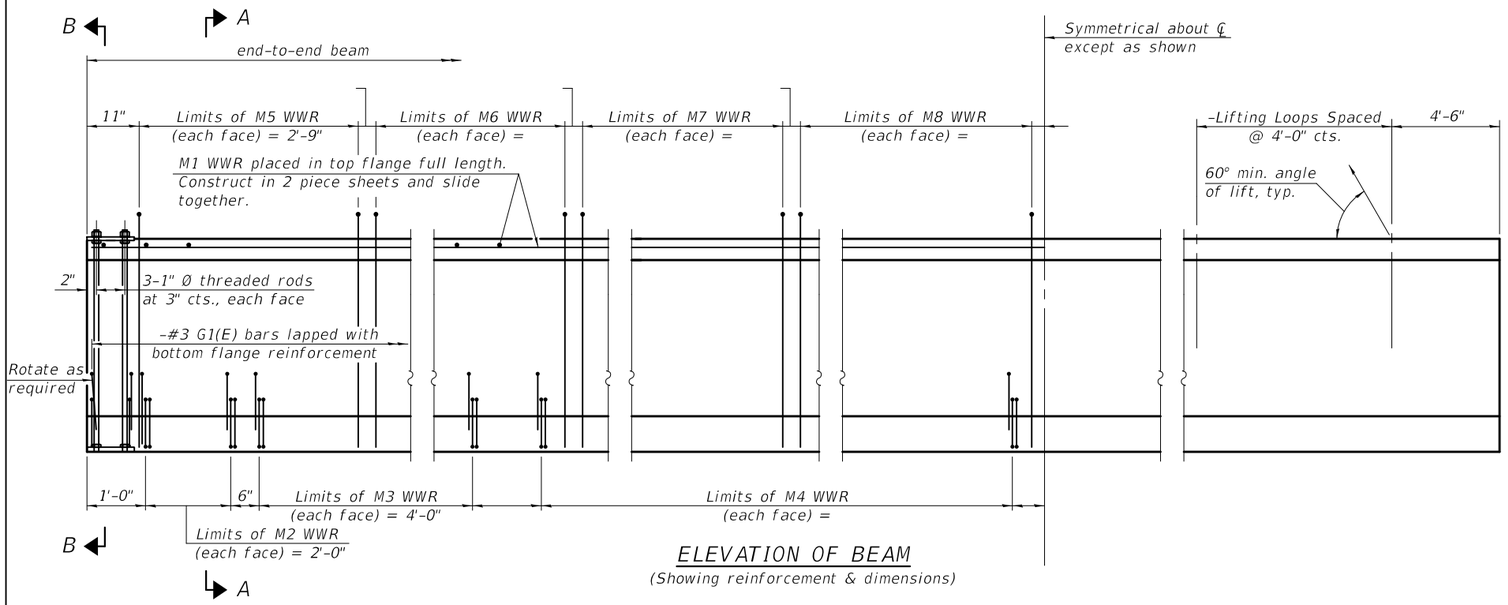
(See Table of Dimensions)

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL45N | Ft. | |

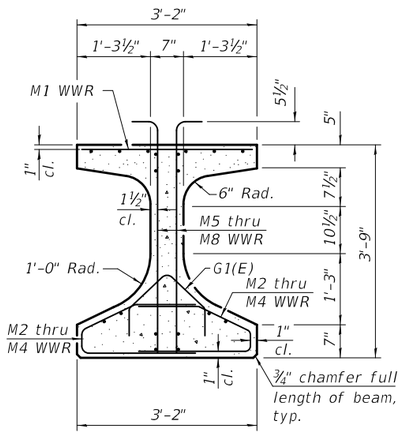
IL45-2438D 2-17-2017

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL45N BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | CONTRACT NO. |
| | PLOT DATE = | CHECKED - | REVISED - | | | | ILLINOIS FED. AID PROJECT |

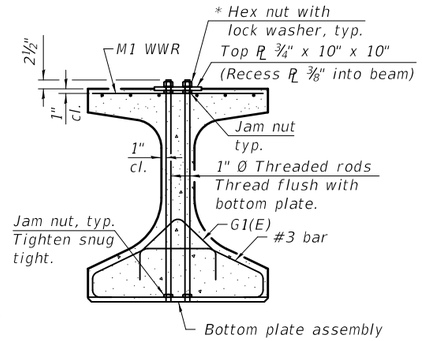



ELEVATION OF BEAM

(Showing reinforcement & dimensions)

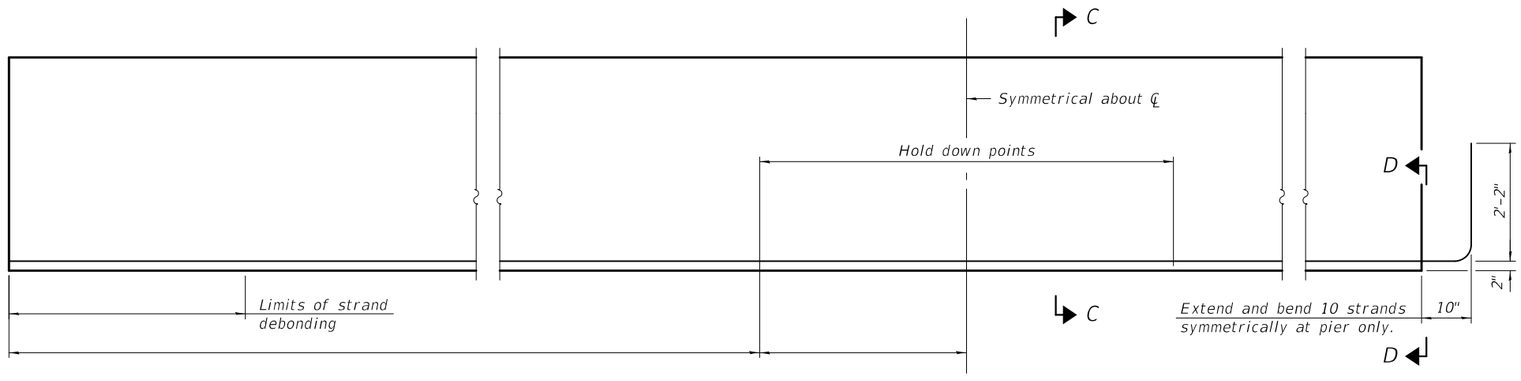



SECTION A-A



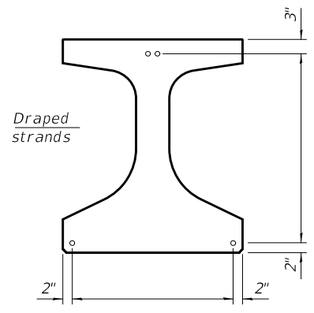

SECTION B-B

* Only tighten sufficiently to compress lock washers



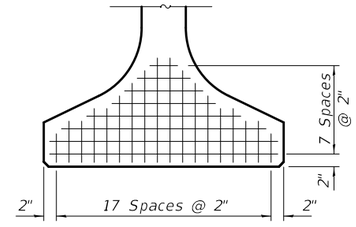

ELEVATION OF BEAM

(Showing prestressing steel)




SECTION C-C

(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

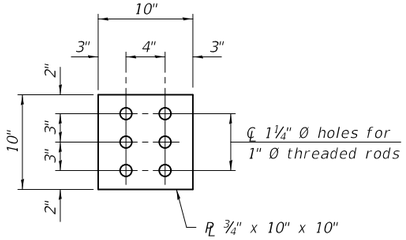
IL45-3838 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

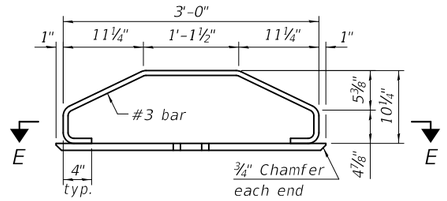
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL45 BEAM**
**STRUCTURE NO.**

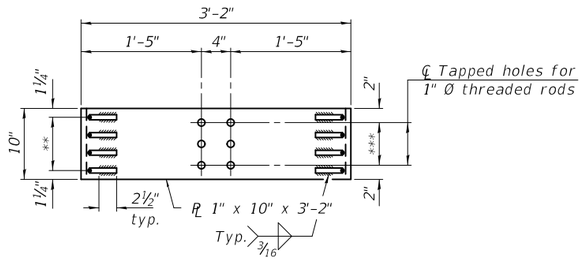
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN – TOP PLATE



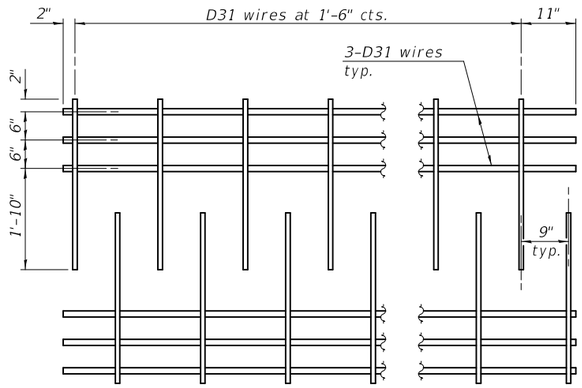

ELEVATION – BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"




M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

## NOTES

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Threaded rods shall be ASTM F 1554 Grade 55.

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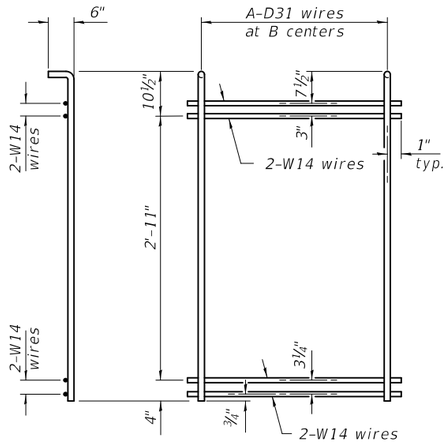
Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)

## TABLE OF DIMENSIONS

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 9 | 6" |
| M4 | – | 1'-6" |
| M5 | 12 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 9 | 6" |
| M4 | – | 1'-6" |
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| M7 | – | 1'-0" |
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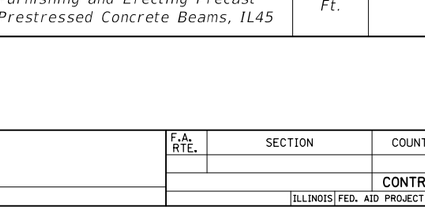
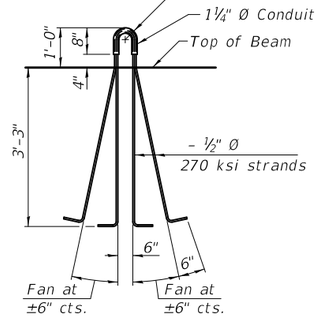
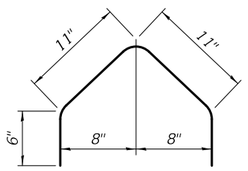



SECTION THRU TOP FLANGE

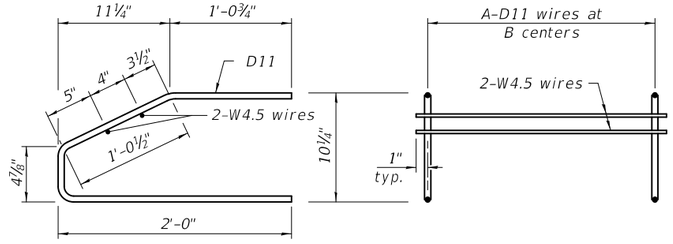
(Showing limits of bond breaker)




LIFTING LOOP DETAIL




BAR G1(E)




M2 THRU M4 WWR DETAIL

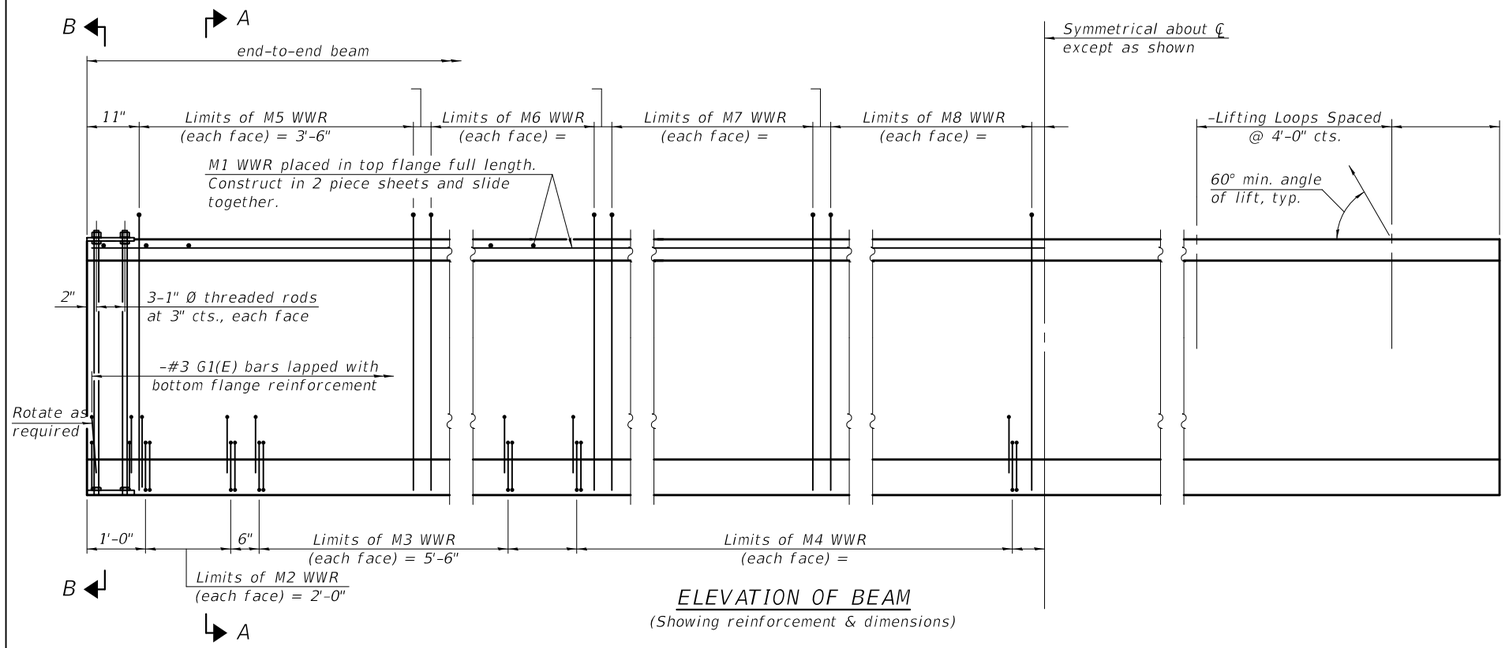
(See Table of Dimensions)

## BILL OF MATERIAL

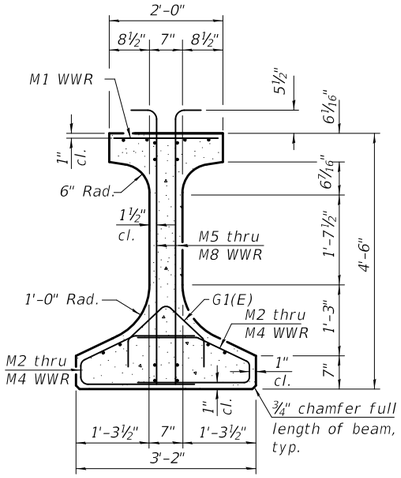
| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL45 | Ft. | |

IL45-3838D 2-17-2017

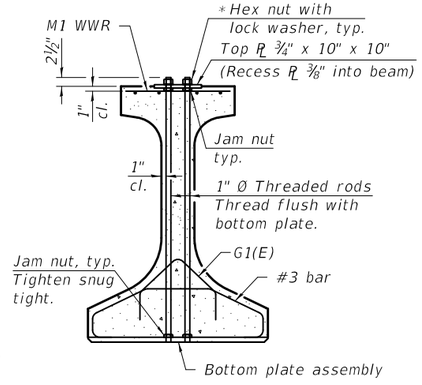
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED – | REVISED – | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL45 BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED – | REVISED – | | | | CONTRACT NO. |
| | PLOT SCALE = | DRAWN – | REVISED – | | | | ILLINOIS FED. AID PROJECT |
| | PLOT DATE = | CHECKED – | REVISED – | | | | |




ELEVATION OF BEAM
(Showing reinforcement & dimensions)

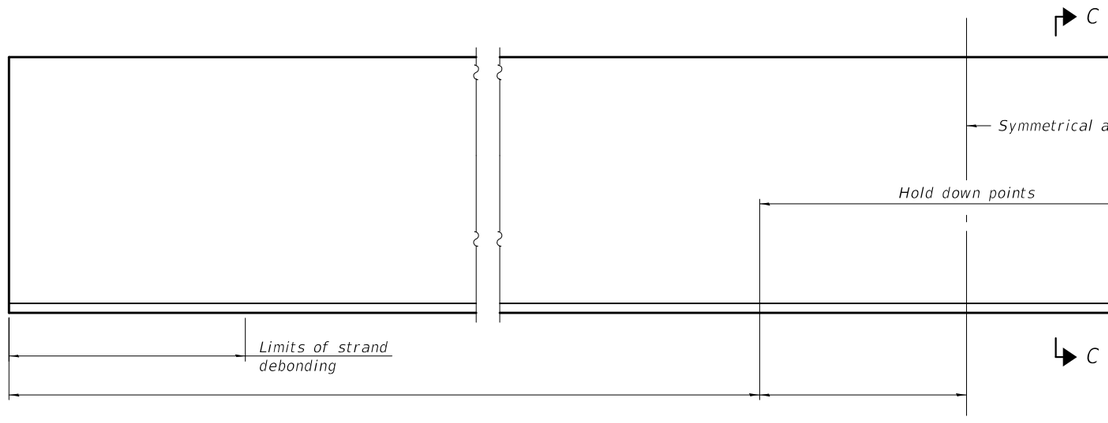



SECTION A-A

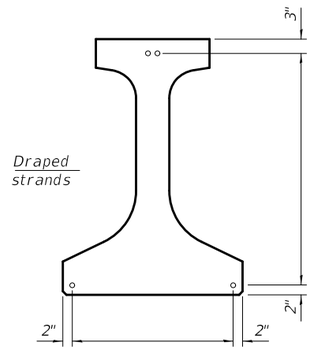



SECTION B-B

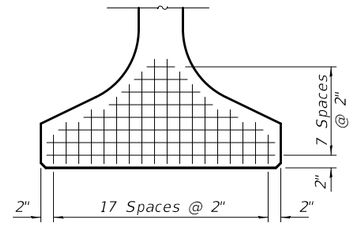
* Only tighten sufficiently to compress lock washers




ELEVATION OF BEAM
(Showing prestressing steel)




SECTION C-C
(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

IL54-2438 2-17-2017

| | | | |
|---|---|---|---|
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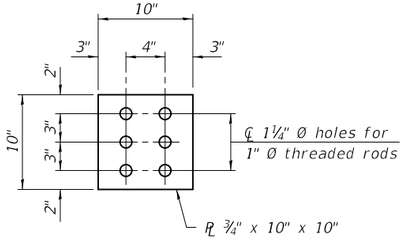
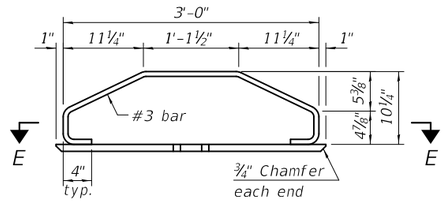
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL54N BEAM**
**STRUCTURE NO.**

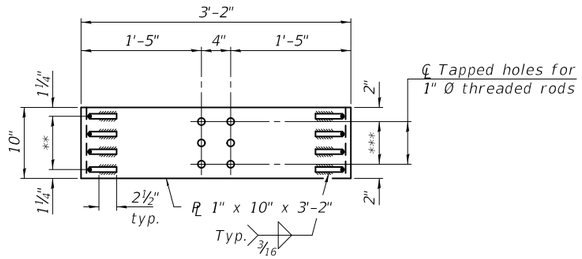
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN – TOP PLATE



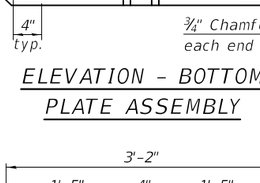

ELEVATION – BOTTOM PLATE ASSEMBLY



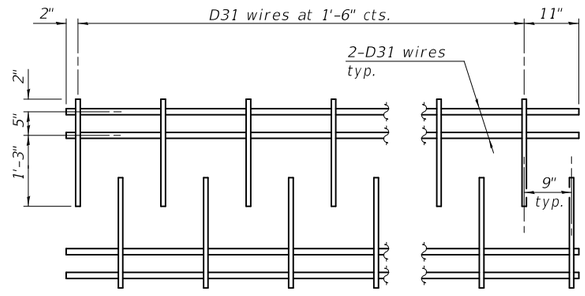

SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"

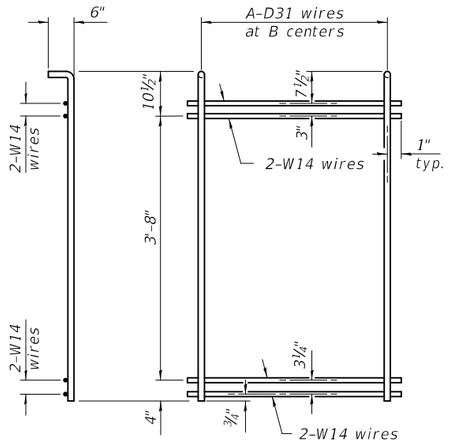



BAR G1(E)



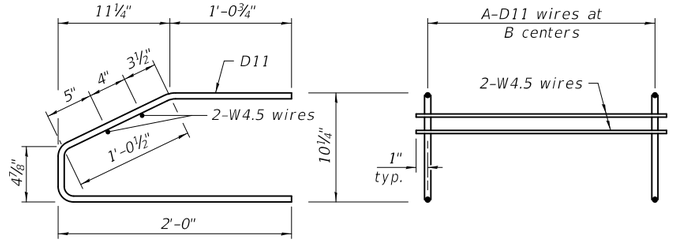

M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)




M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

## TABLE OF DIMENSIONS

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 12 | 6" |
| M4 | – | 1'-6" |
| M5 | 15 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 12 | 6" |
| M4 | – | 1'-6" |
| M5 | 15 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Bend the extended strands inward on the fascia beams to maintain 1½" clearance inside the pier diaphragm.

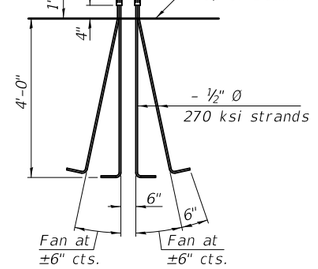
The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




LIFTING LOOP DETAIL

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL54N | Ft. | |

IL54-2438D 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
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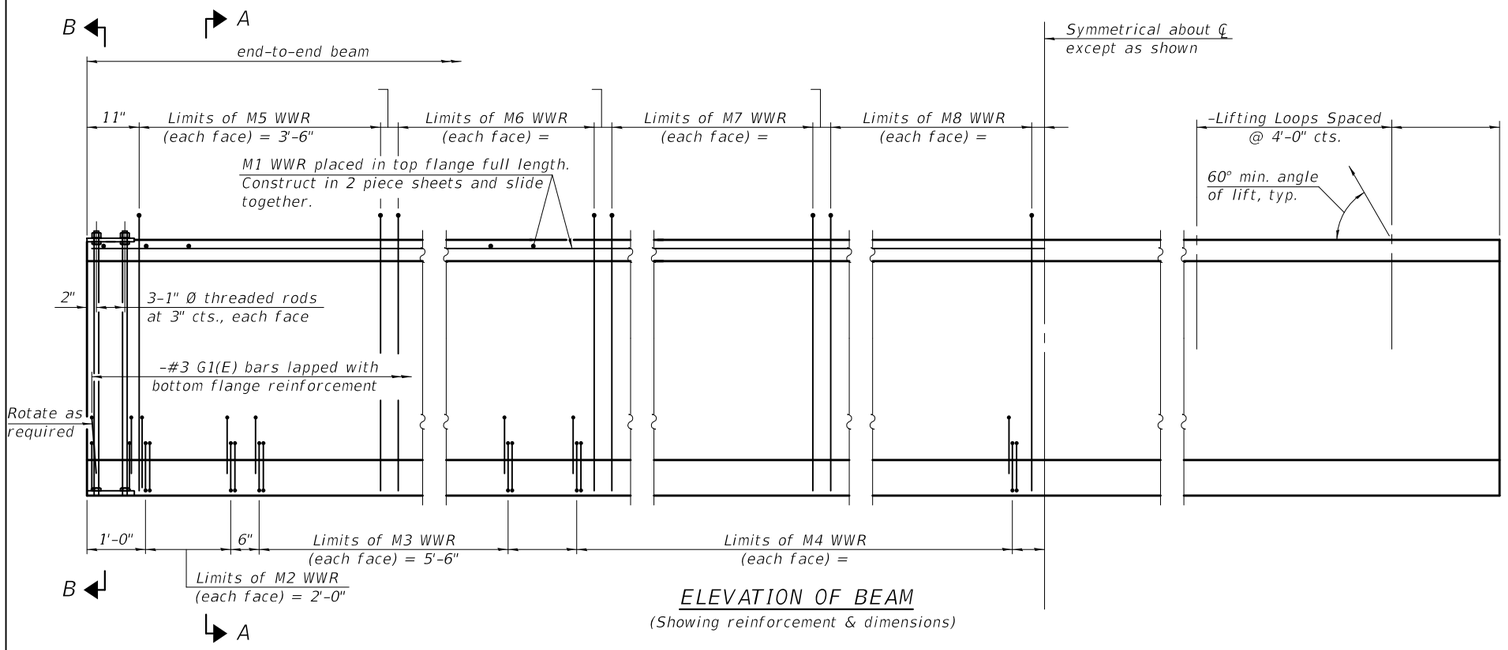
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

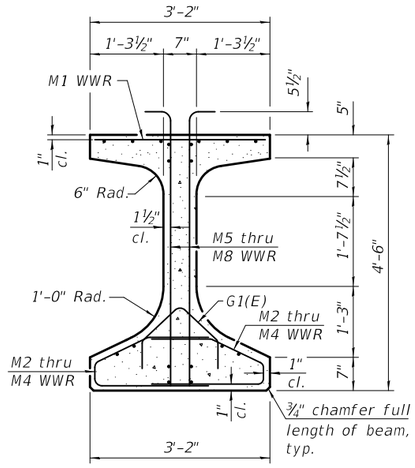
**IL54N BEAM DETAILS**
**STRUCTURE NO.**

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |

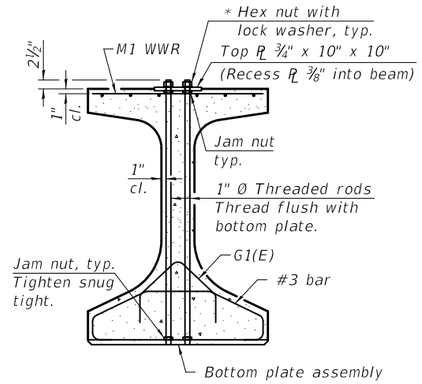



ELEVATION OF BEAM

(Showing reinforcement & dimensions)

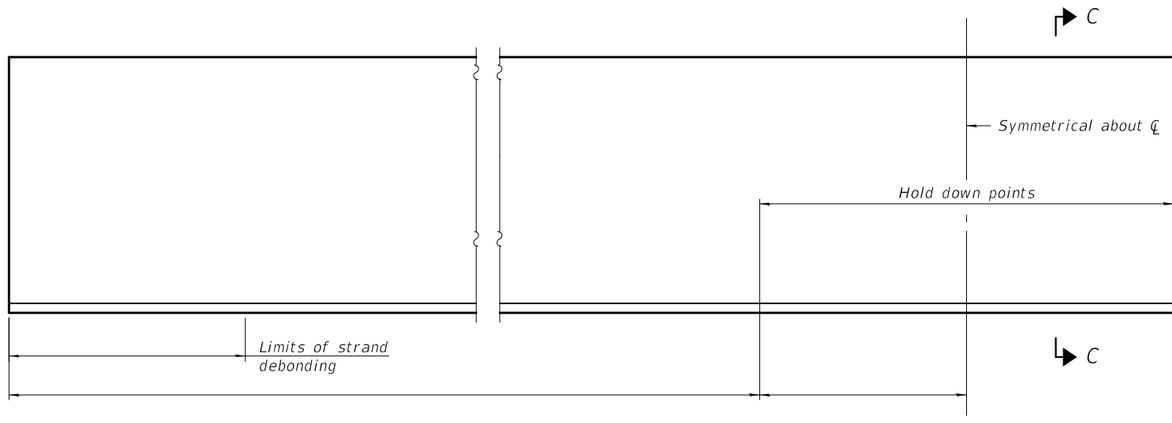



SECTION A-A



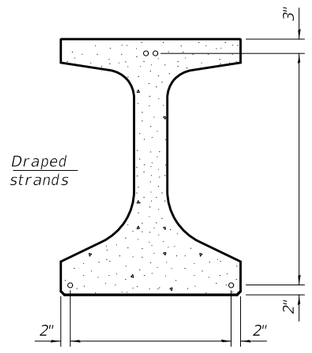

SECTION B-B

* Only tighten sufficiently to compress lock washers



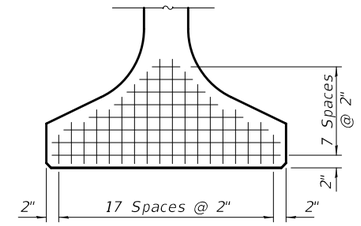

ELEVATION OF BEAM

(Showing prestressing steel)




SECTION C-C

(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

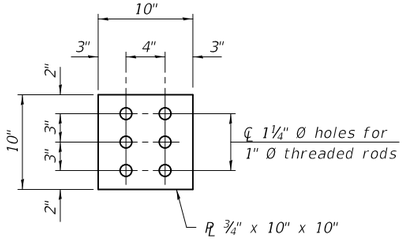
IL54-3838 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

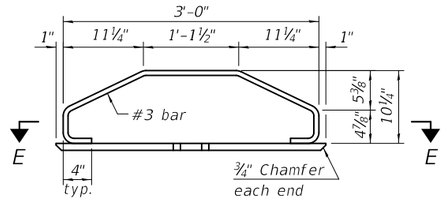
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL54 BEAM**
**STRUCTURE NO.**

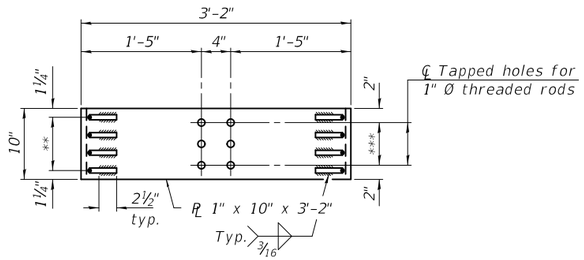
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN – TOP PLATE




ELEVATION – BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

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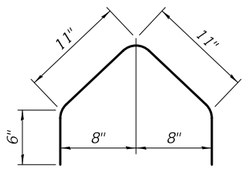
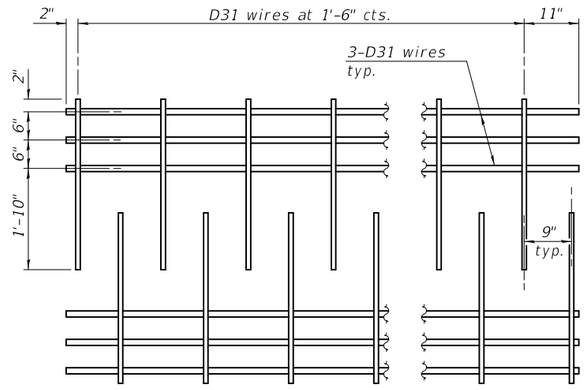



BAR G1(E)




M1 WWR DETAIL

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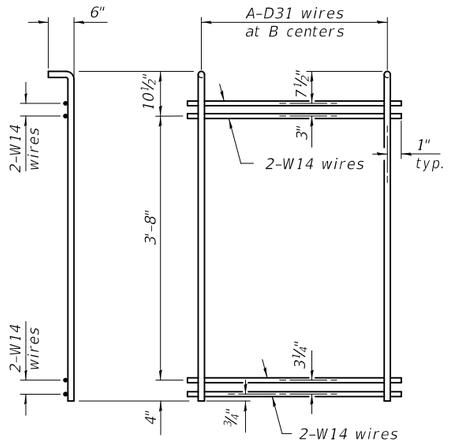
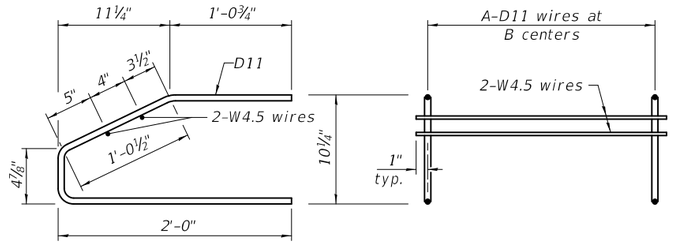



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)




M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

## TABLE OF DIMENSIONS

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 12 | 6" |
| M4 | – | 1'-6" |
| M5 | 15 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
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## NOTES

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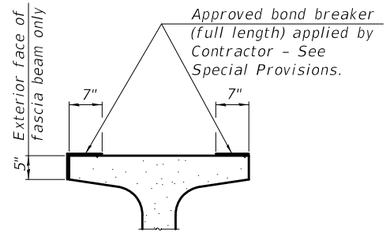
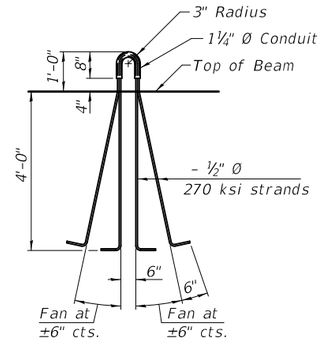



SECTION THRU TOP FLANGE

(Showing limits of bond breaker)




LIFTING LOOP DETAIL

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL54 | Ft. | |

IL54-3838D 2-17-2017

| | | | |
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**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL54 BEAM DETAILS**
**STRUCTURE NO.**

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
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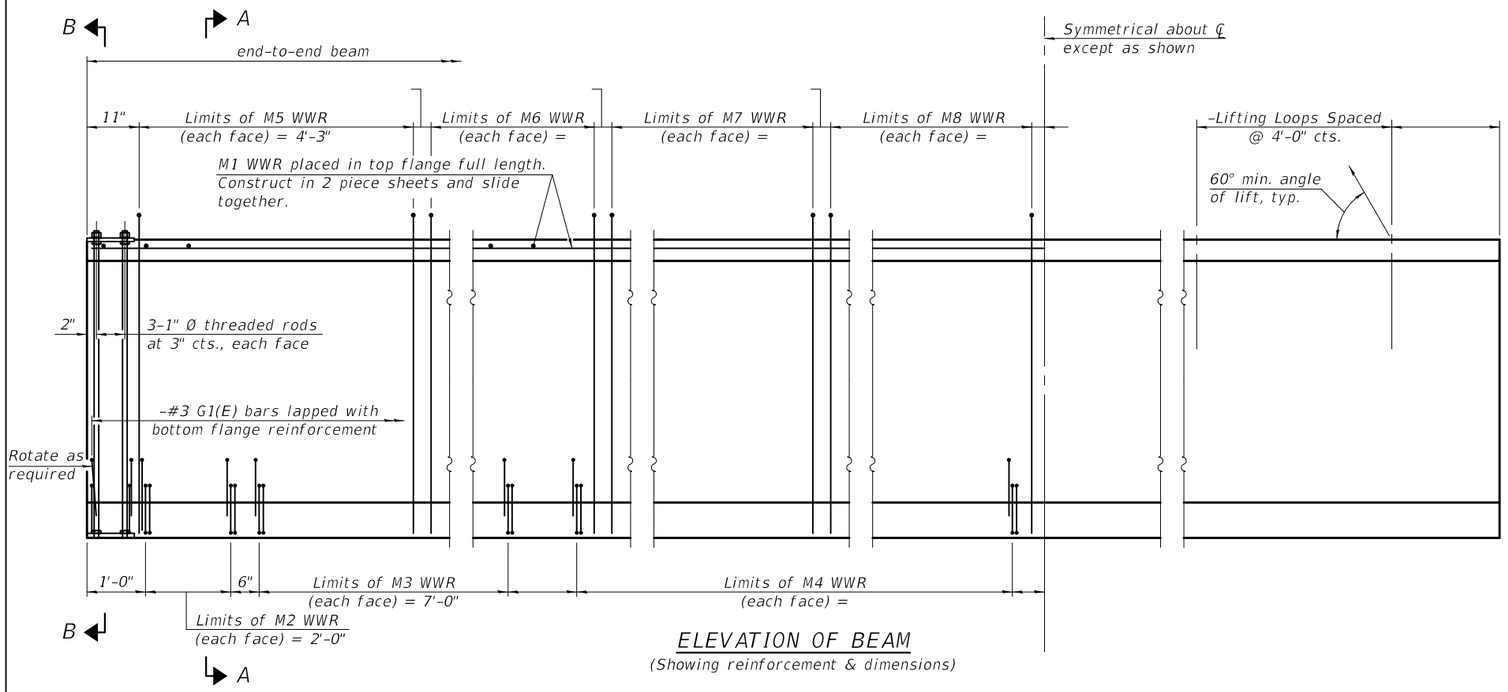
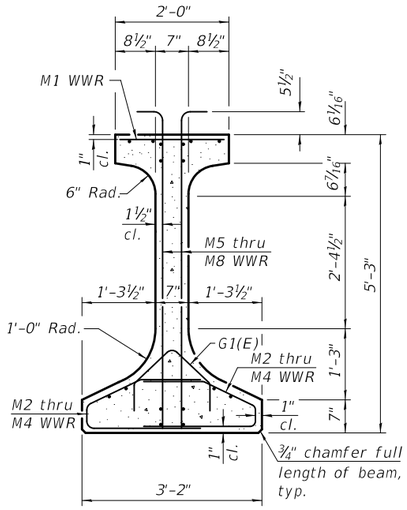
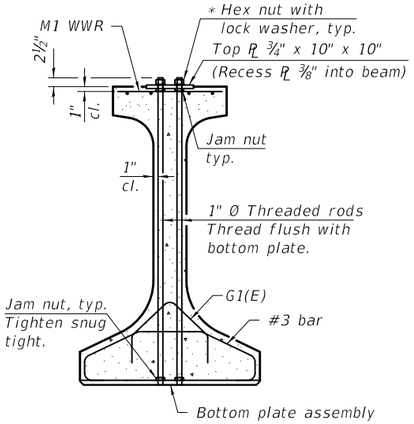
| | | CONTRACT NO. | | |
| | ILLINOIS FED. AID PROJECT | | | |



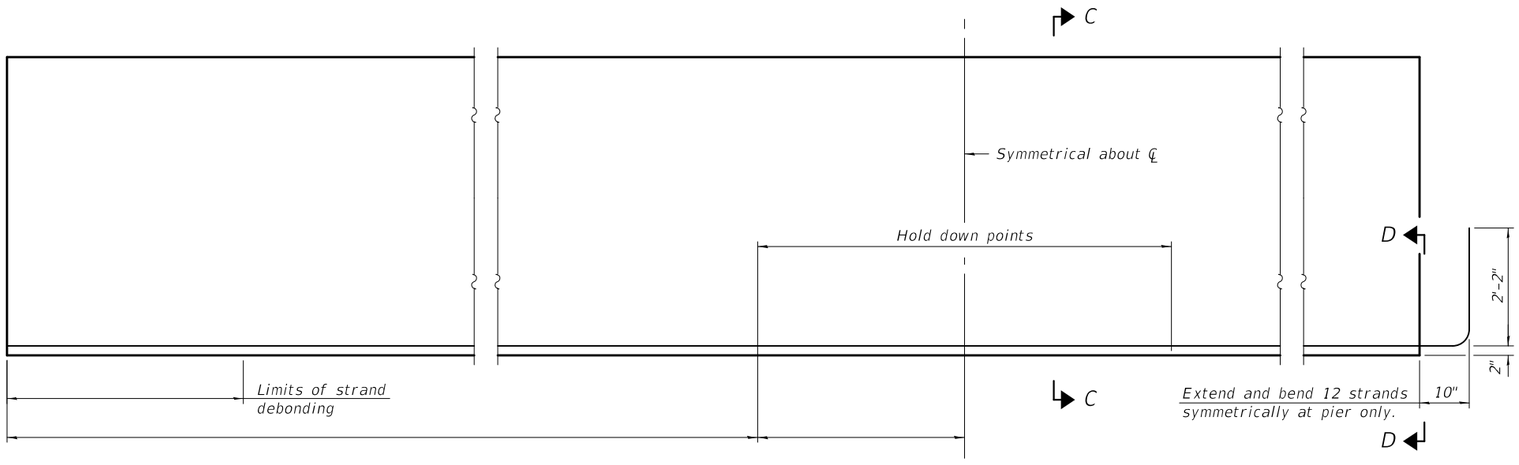

## ELEVATION OF BEAM
(Showing reinforcement & dimensions)



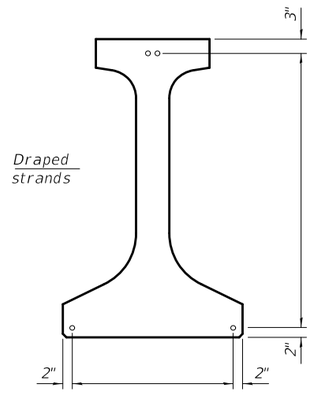

## SECTION A-A




## SECTION B-B
*Only tighten sufficiently to compress lock washers




## ELEVATION OF BEAM
(Showing prestressing steel)

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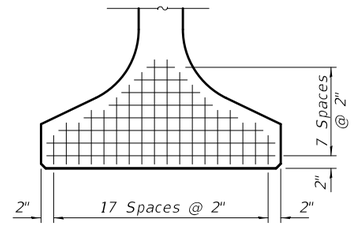
(__-0.6" Ø 270 ksi strands)




## VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

IL63-2438 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL63N BEAM**
**STRUCTURE NO.**

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
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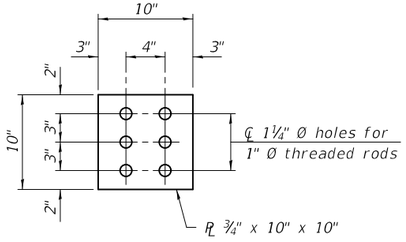
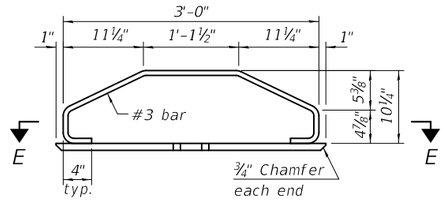
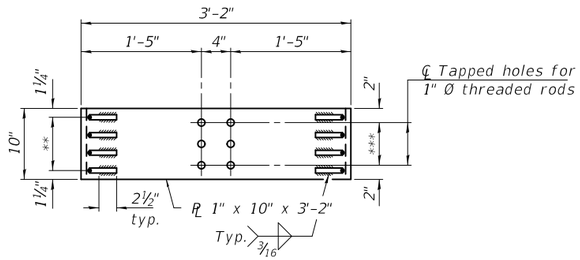
| | ILLINOIS | FED. AID PROJECT | | |




PLAN - TOP PLATE



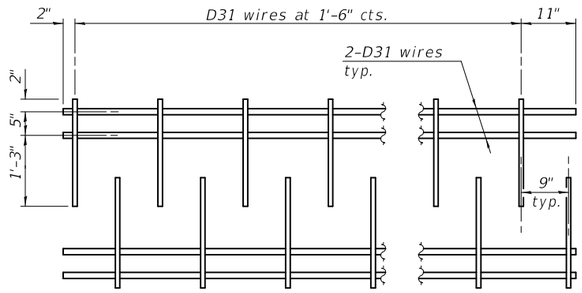

ELEVATION - BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"




M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Bend the extended strands inward on the fascia beams to maintain 1½" clearance inside the pier diaphragm.

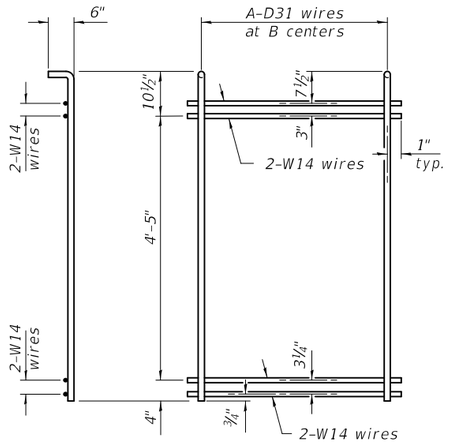
The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)

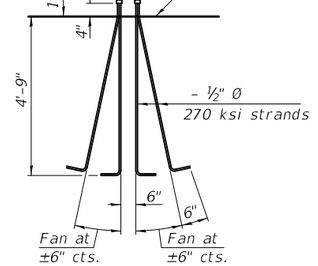
## TABLE OF DIMENSIONS

SPAN

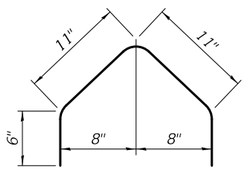
| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 15 | 6" |
| M4 | - | 1'-6" |
| M5 | 18 | 3" |
| M6 | - | 6" |
| M7 | - | 1'-0" |
| M8 | - | 2'-0" |

SPAN

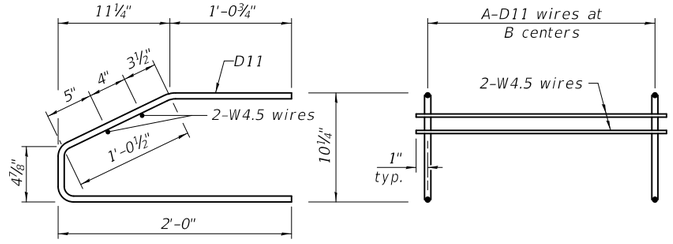
| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 15 | 6" |
| M4 | - | 1'-6" |
| M5 | 18 | 3" |
| M6 | - | 6" |
| M7 | - | 1'-0" |
| M8 | - | 2'-0" |




LIFTING LOOP DETAIL




BAR G1(E)




M2 THRU M4 WWR DETAIL

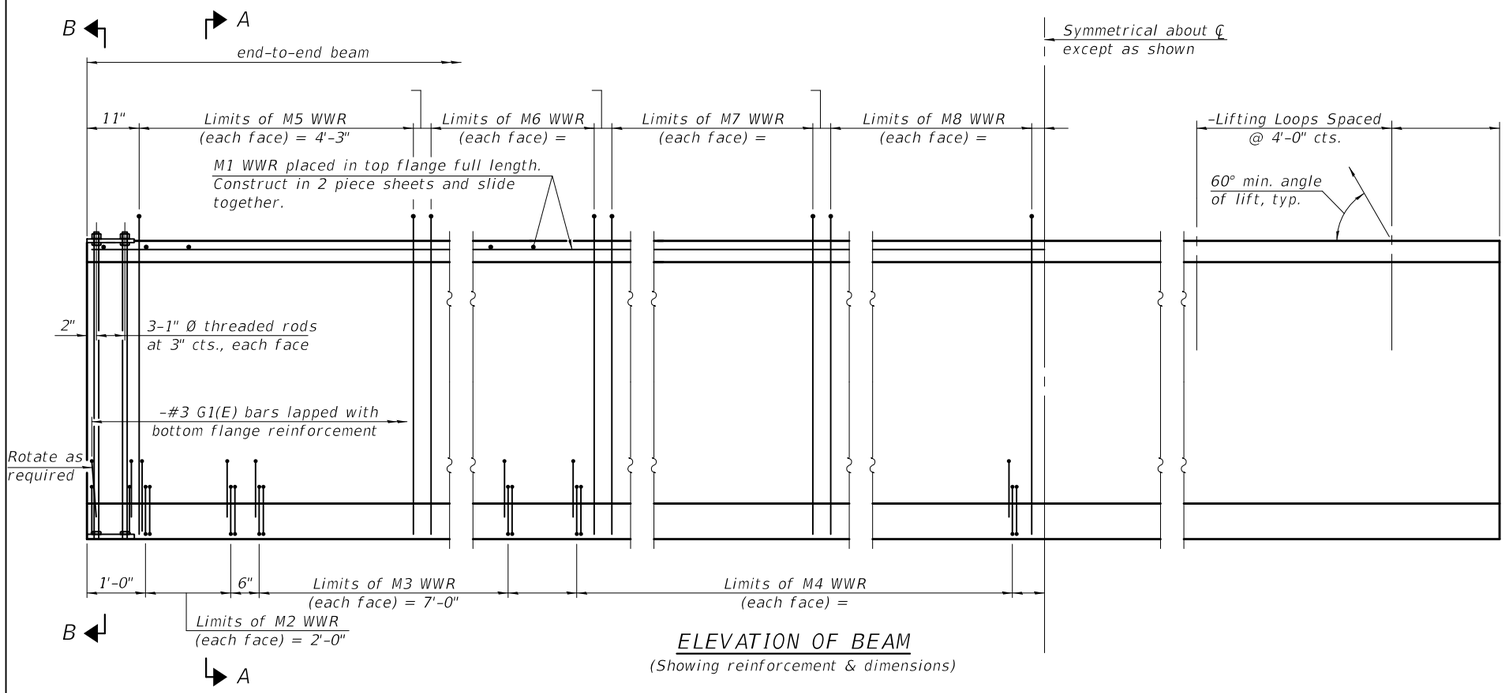
(See Table of Dimensions)

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL63N | Ft. | |

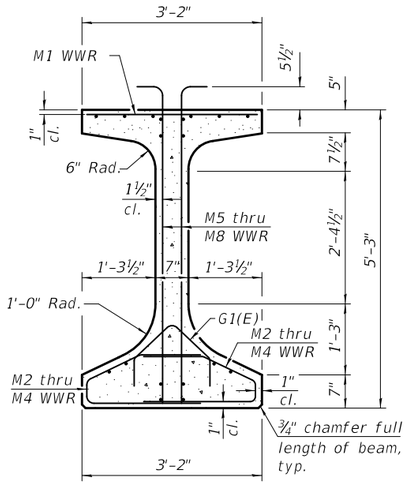
IL63-2438D 2-17-2017

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL63N BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | CONTRACT NO. |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | ILLINOIS FED. AID PROJECT |
| | PLOT DATE = | CHECKED - | REVISED - | | | | |

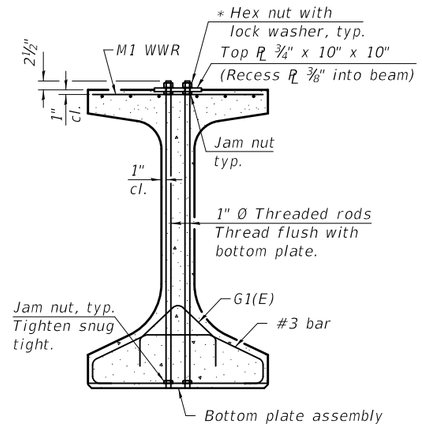



ELEVATION OF BEAM

(Showing reinforcement & dimensions)

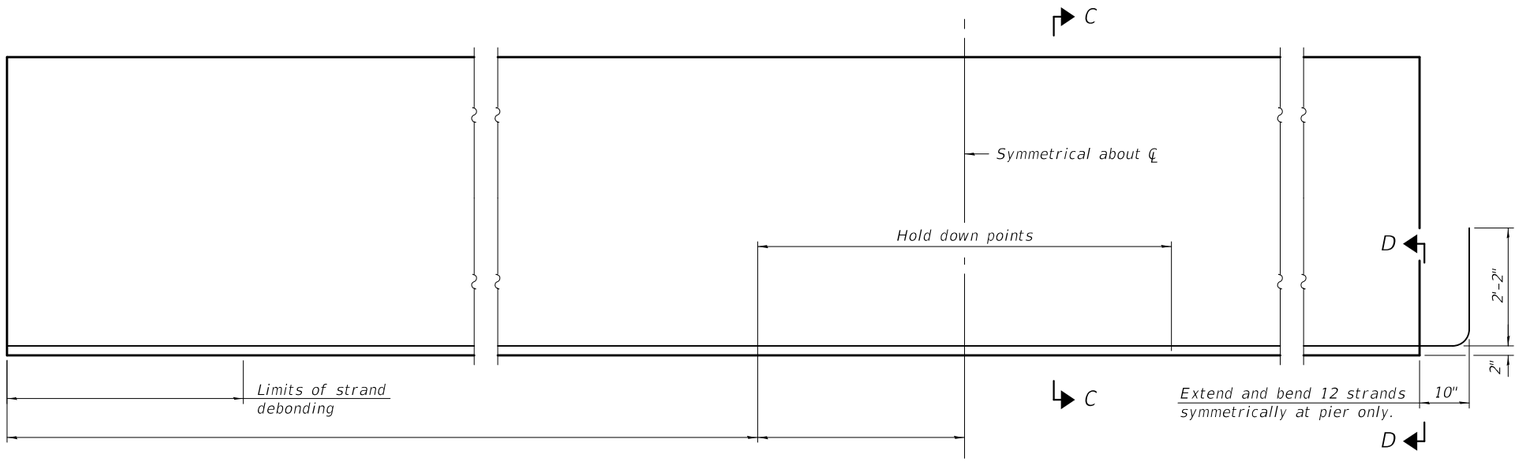



SECTION A-A



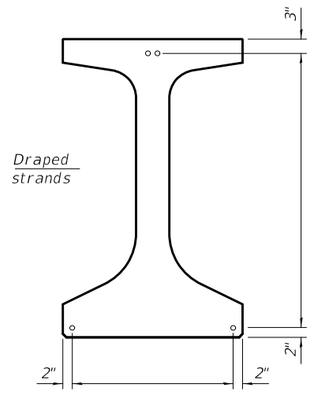

SECTION B-B

* Only tighten sufficiently to compress lock washers



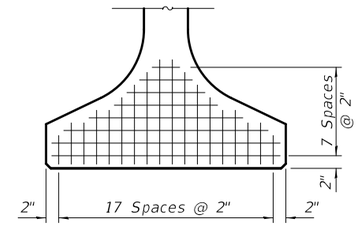

ELEVATION OF BEAM

(Showing prestressing steel)




SECTION C-C

(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

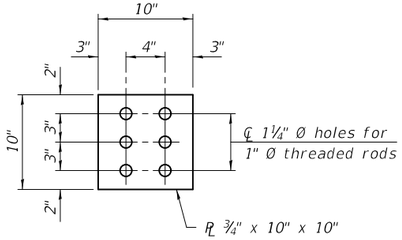
IL63-3838 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

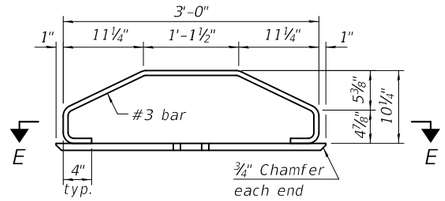
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL63 BEAM**
**STRUCTURE NO.**

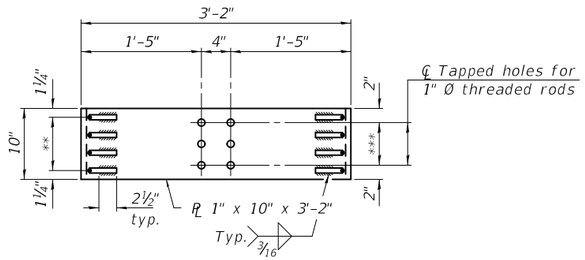
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN – TOP PLATE



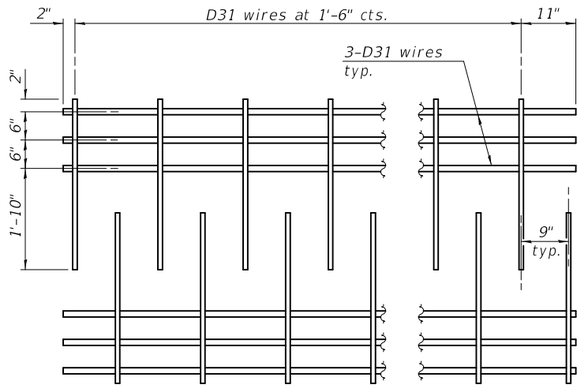

ELEVATION – BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"




M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

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Bend the extended strands inward on the fascia beams to maintain 1½" clearance inside the pier diaphragm.

The top and bottom plates shall be AASHTO M270 Grade 50.

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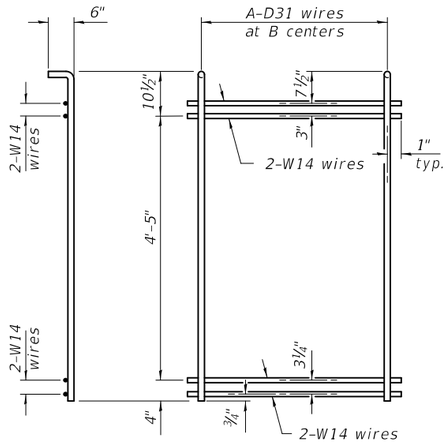
Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)

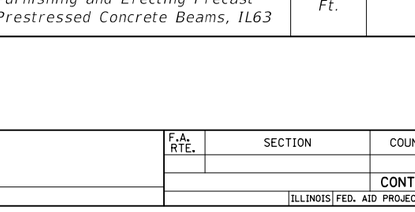
## TABLE OF DIMENSIONS

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 15 | 6" |
| M4 | – | 1'-6" |
| M5 | 18 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

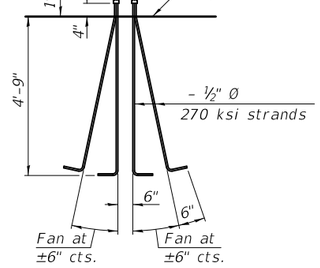
SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 15 | 6" |
| M4 | – | 1'-6" |
| M5 | 18 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

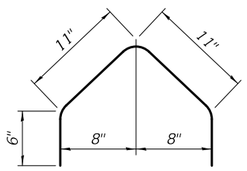



SECTION THRU TOP FLANGE

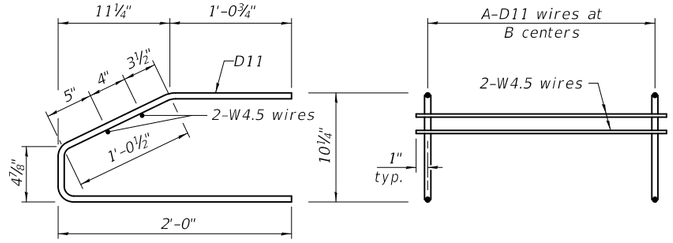
(Showing limits of bond breaker)




LIFTING LOOP DETAIL




BAR G1(E)




M2 THRU M4 WWR DETAIL

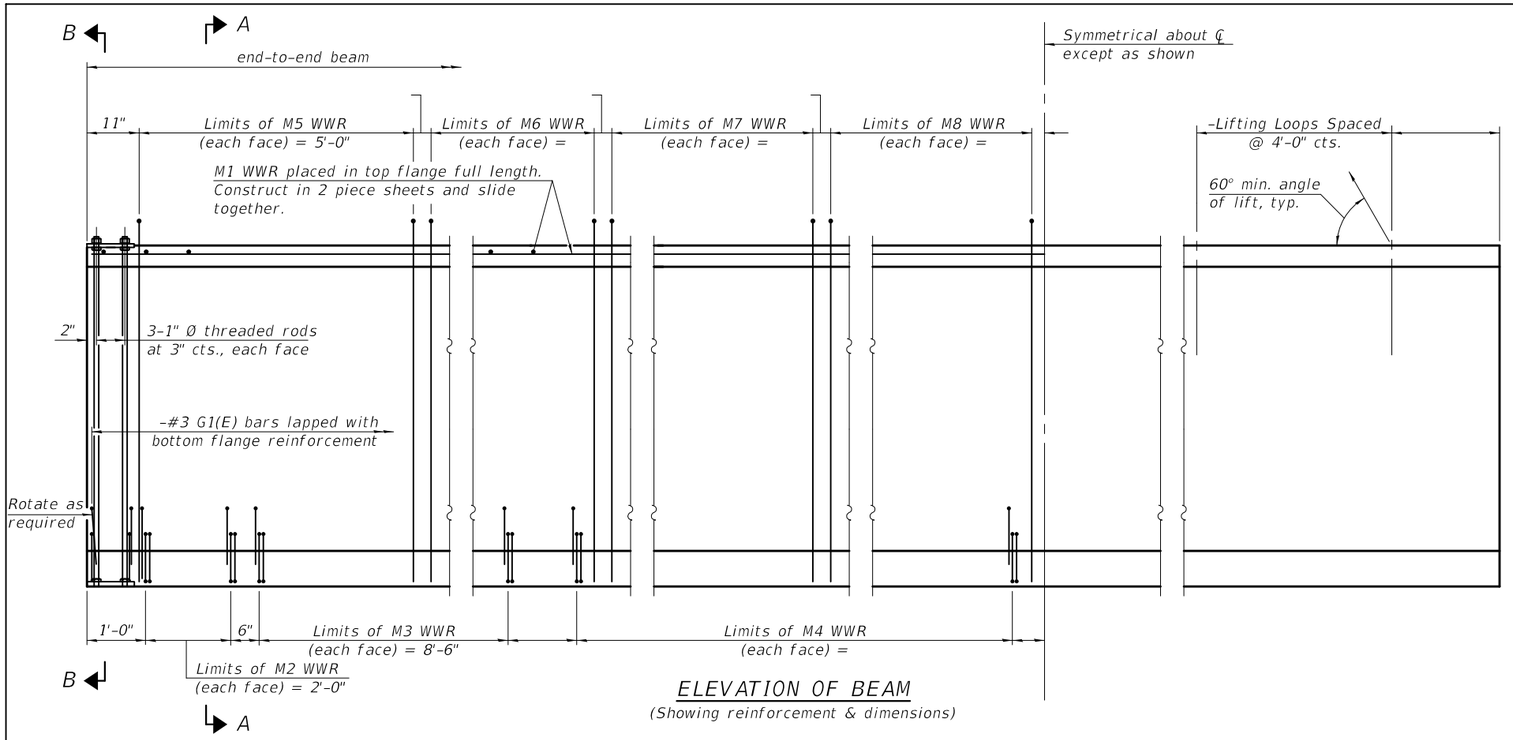
(See Table of Dimensions)

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL63 | Ft. | |

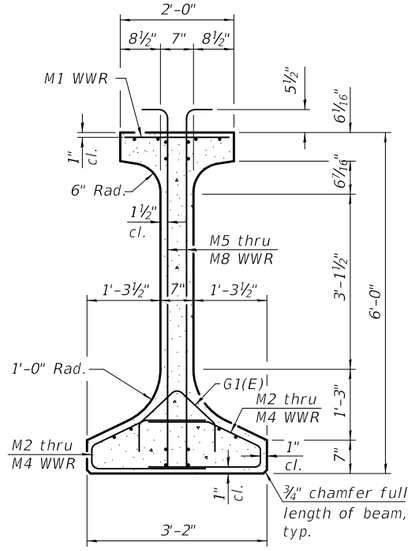
IL63-3838D 2-17-2017

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED – | REVISED – | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL63 BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED – | REVISED – | | | | CONTRACT NO. |
| | PLOT SCALE = | DRAWN – | REVISED – | | | | ILLINOIS FED. AID PROJECT |
| | PLOT DATE = | CHECKED – | REVISED – | | | | |

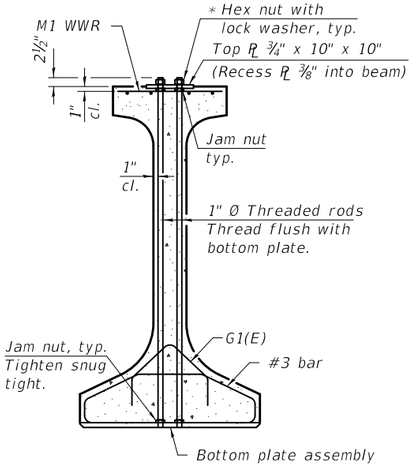



ELEVATION OF BEAM

(Showing reinforcement & dimensions)

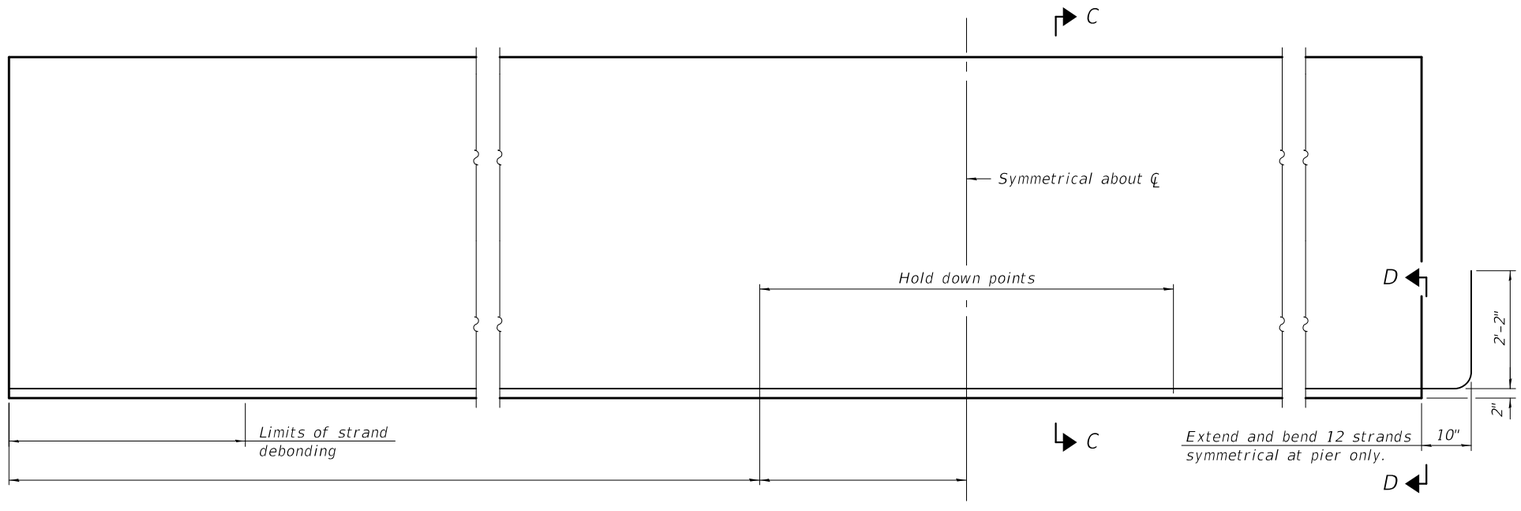



SECTION A-A



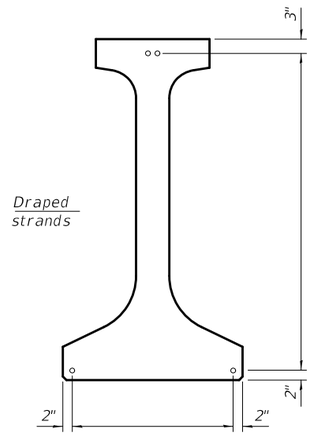

SECTION B-B

*Only tighten sufficiently to
compress lock washers



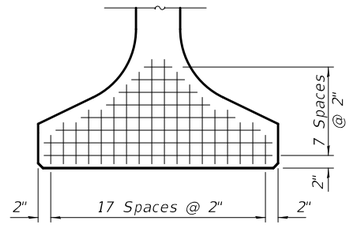

ELEVATION OF BEAM

(Showing prestressing steel)




SECTION C-C

(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

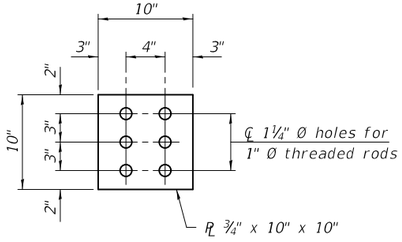
IL72-2438 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

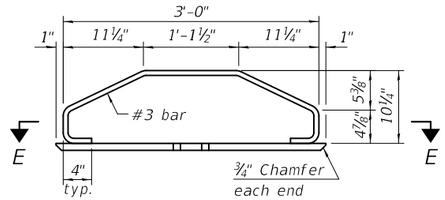
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL72N BEAM**
**STRUCTURE NO.**

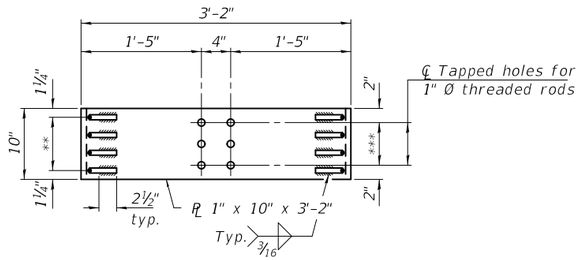
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN – TOP PLATE




ELEVATION – BOTTOM PLATE ASSEMBLY



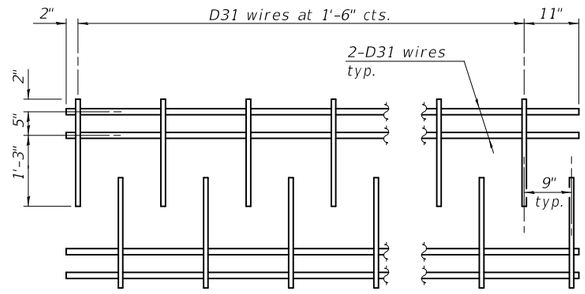

SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"

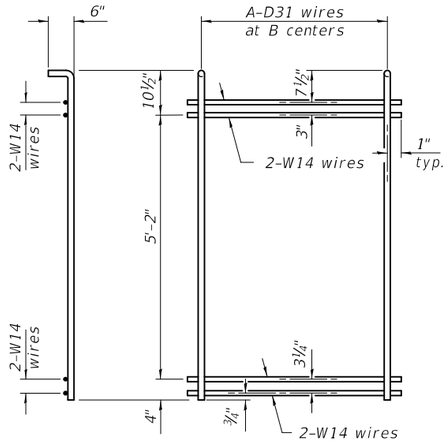



BAR G1(E)



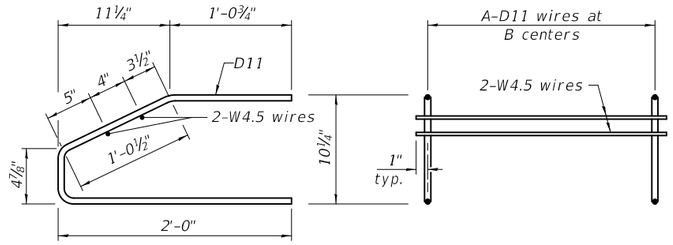

M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)




M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Bend the extended strands inward on the fascia beams to maintain 1½" clearance inside the pier diaphragm.

The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.

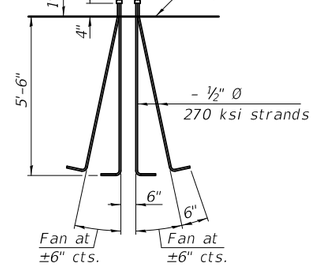
## TABLE OF DIMENSIONS

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 18 | 6" |
| M4 | – | 1'-6" |
| M5 | 21 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 18 | 6" |
| M4 | – | 1'-6" |
| M5 | 21 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |




LIFTING LOOP DETAIL

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL72N | Ft. | |

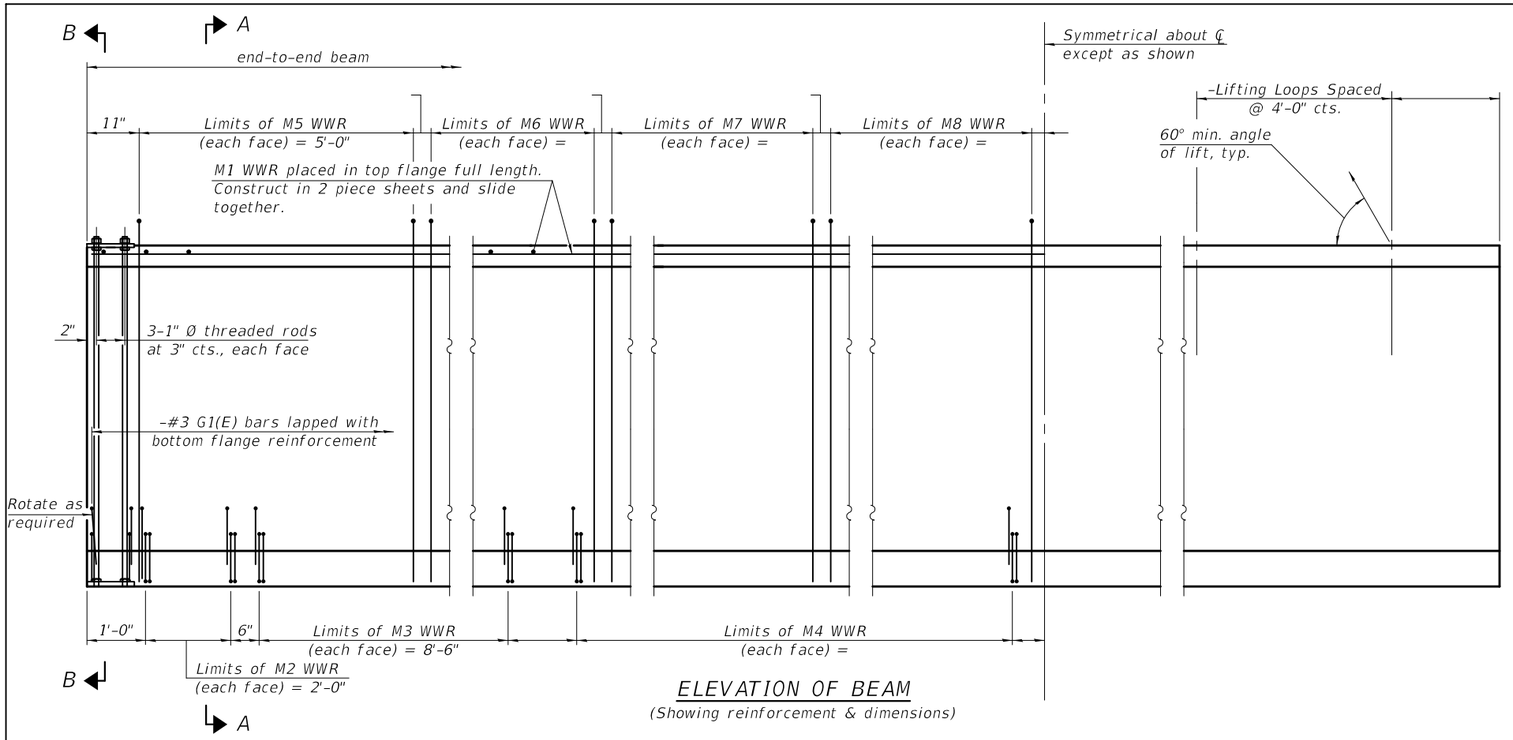
IL72-2438D 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

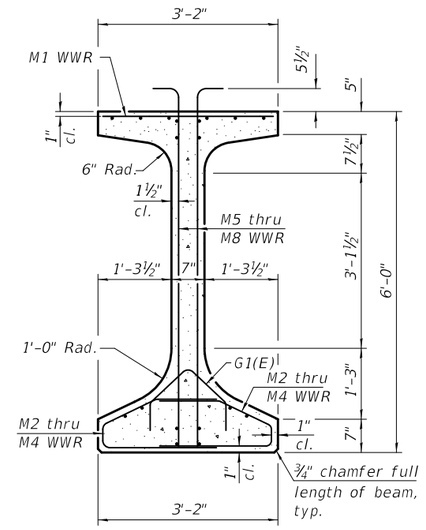
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL72N BEAM DETAILS**
**STRUCTURE NO.**

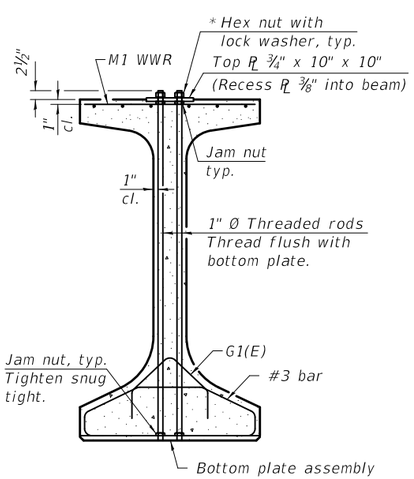
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |



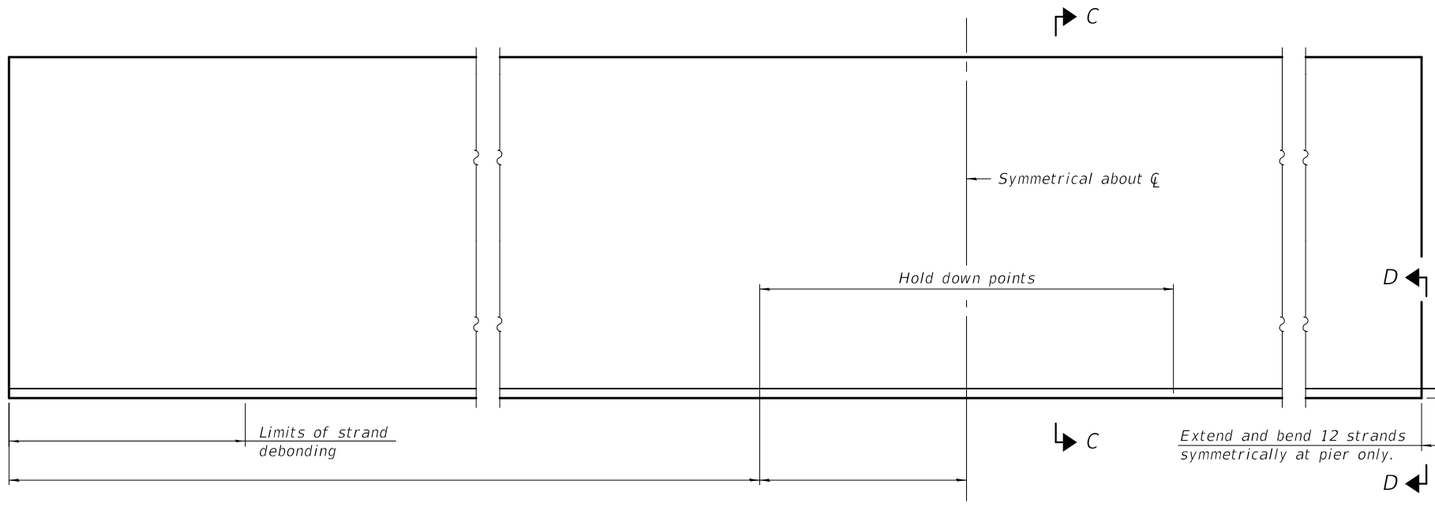

ELEVATION OF BEAM
(Showing reinforcement & dimensions)



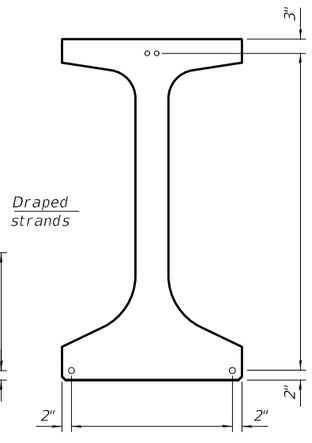

SECTION A-A



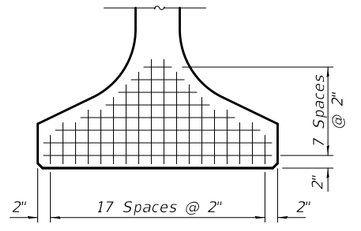

SECTION B-B
*Only tighten sufficiently to
compress lock washers




ELEVATION OF BEAM
(Showing prestressing steel)




SECTION C-C
(__-0.6" Ø 270 ksi strands)




VIEW D-D

○ Fully bonded strand

▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

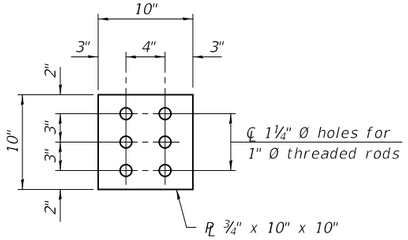
IL72-3838 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

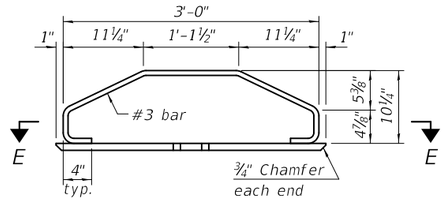
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**IL72 BEAM**
**STRUCTURE NO.**

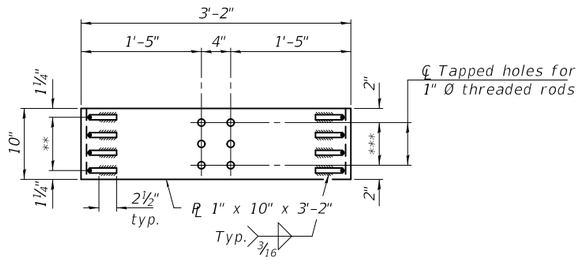
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




PLAN – TOP PLATE



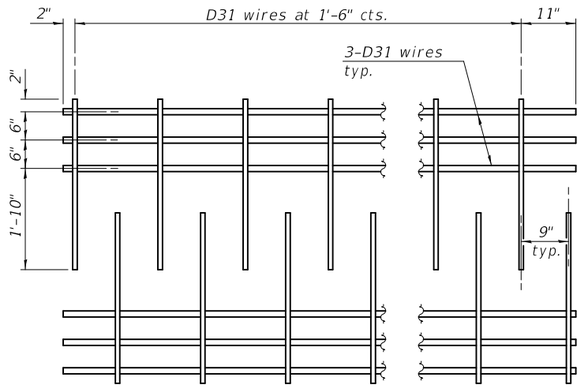

ELEVATION – BOTTOM PLATE ASSEMBLY




SECTION E-E

** 3 Spaces at 2½" = 7½"

*** 2 Spaces at 3" = 6"




M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be ½" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Bend the extended strands inward on the fascia beams to maintain 1½" clearance inside the pier diaphragm.

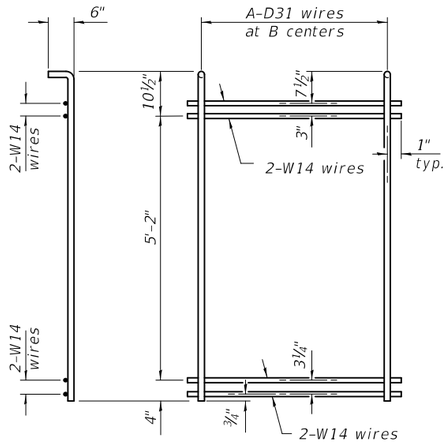
The top and bottom plates shall be AASHTO M270 Grade 50.

The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.




M5 THRU M8 WWR DETAIL

(See Table of Dimensions)

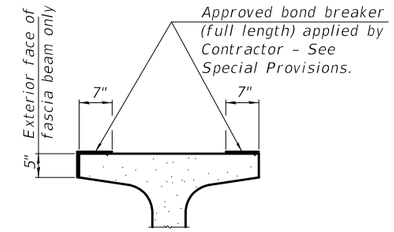
## TABLE OF DIMENSIONS

SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 18 | 6" |
| M4 | – | 1'-6" |
| M5 | 21 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

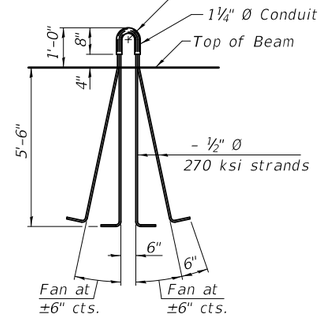
SPAN

| WWR | A | B |
|---|---|---|
| M2 | 9 | 3" |
| M3 | 18 | 6" |
| M4 | – | 1'-6" |
| M5 | 21 | 3" |
| M6 | – | 6" |
| M7 | – | 1'-0" |
| M8 | – | 2'-0" |

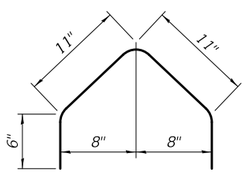



SECTION THRU TOP FLANGE

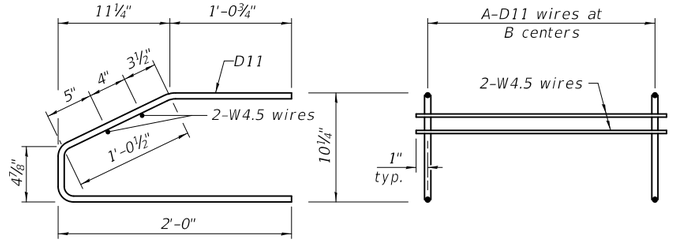
(Showing limits of bond breaker)




LIFTING LOOP DETAIL




BAR G1(E)




M2 THRU M4 WWR DETAIL

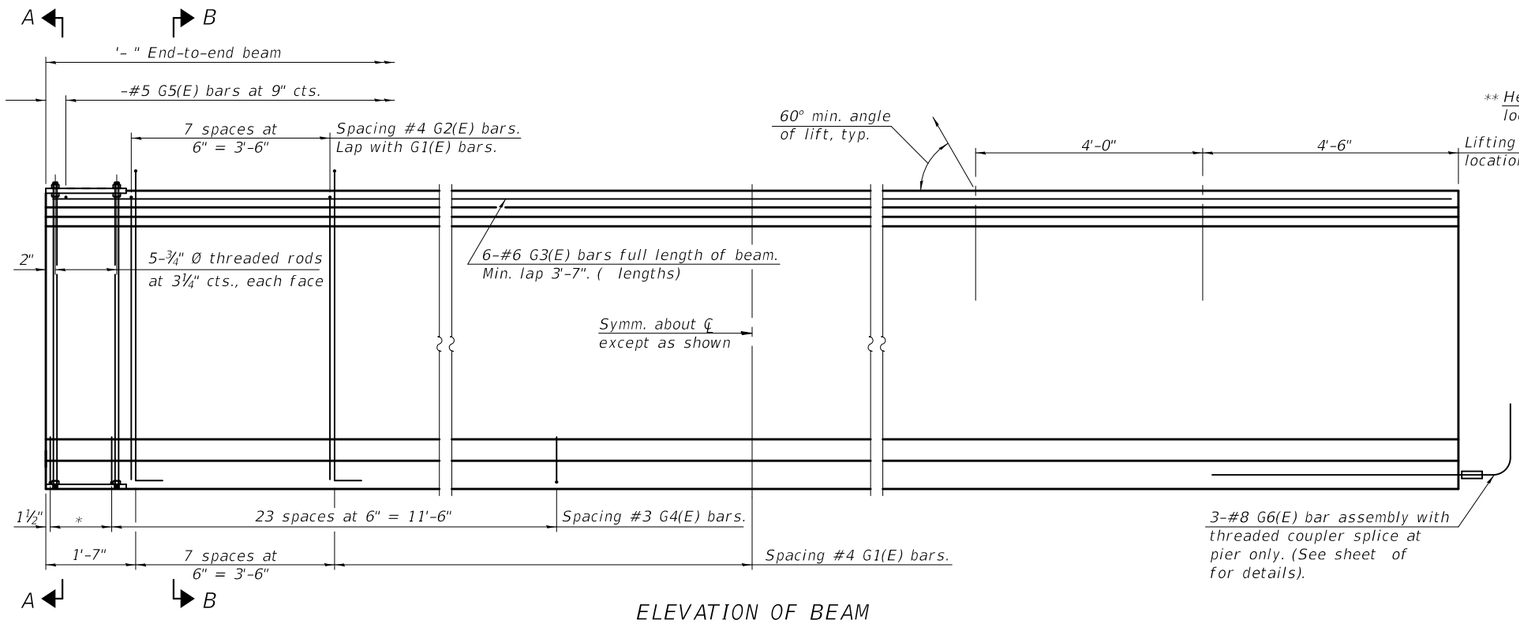
(See Table of Dimensions)

## BILL OF MATERIAL

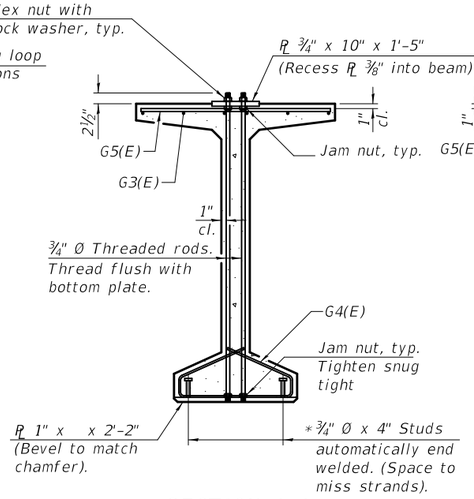
| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Beams, IL72 | Ft. | |

IL72-3838D 2-17-2017

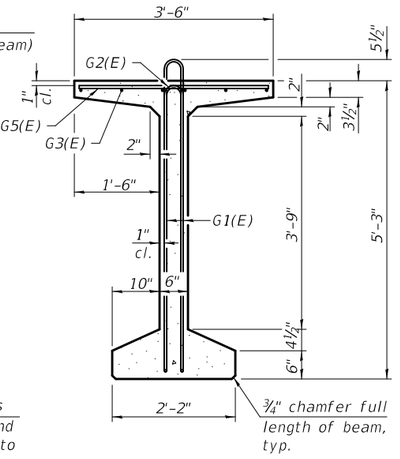
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED – | REVISED – | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL72 BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED – | REVISED – | | | | CONTRACT NO. |
| | PLOT SCALE = | DRAWN – | REVISED – | | | | ILLINOIS FED. AID PROJECT |
| | PLOT DATE = | CHECKED – | REVISED – | | | | |



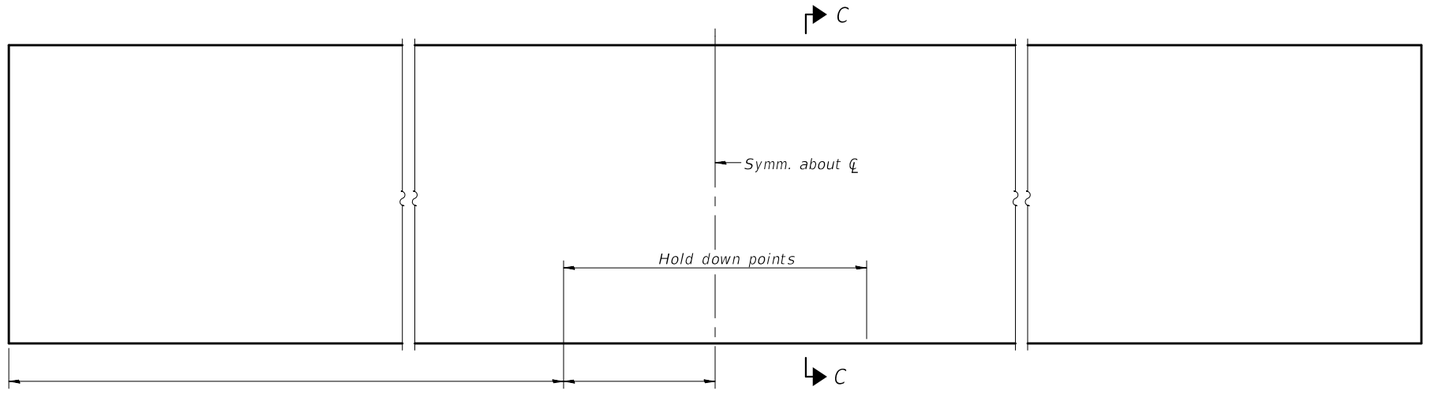

ELEVATION OF BEAM
(Showing reinforcement & dimensions)



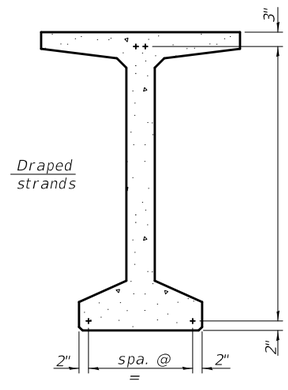

SECTION A-A
** Only tighten sufficiently to compress lock washers



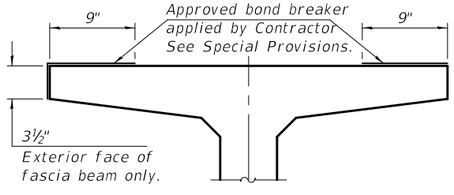

SECTION B-B




ELEVATION OF BEAM
(Showing prestressing steel)




SECTION C-C
( -½" Ø 270 ksi strands)




SECTION THRU TOP FLANGE
(Showing limits of bond breaker)

BAR LIST
ONE BEAM ONLY
(For information only)

| Bar | No. | Size | Length | Shape |
|---|---|---|---|---|
| G1(E) | | #4 | 12'-1" | |
| G2(E) | | #4 | 10'-2" | |
| G3(E) | | #6 | | |
| G4(E) | | #3 | 4'-11" | |
| G5(E) | | #5 | 3'-4" | |
| G6(E) | | #8 | 6'-6" | |

Notes:
See sheet of for additional details and Bill of Material.

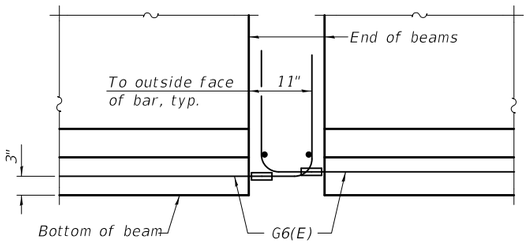
PBT-4-63 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

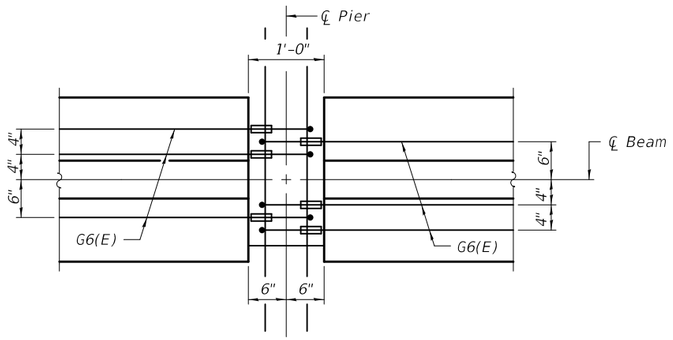
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

63" PPC BULB T-BEAM
STRUCTURE NO.

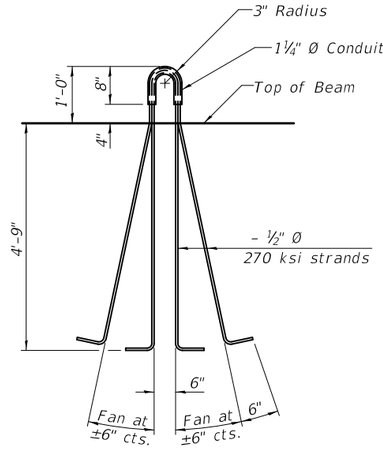
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




ELEVATION OF BEAM AT PIER




PLAN OF BEAM AT PIER




LIFTING LOOP DETAIL

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of psi and a release concrete compressive strength, f'ci, of psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Tilt G6(E) bars when necessary to maintain 1½" clearance.

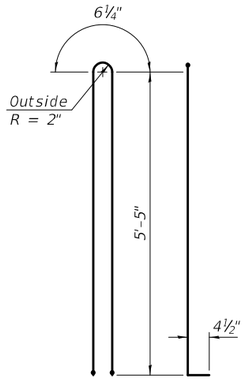
The top and bottom plates shall be AASHTO M270 Grade 50.

The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

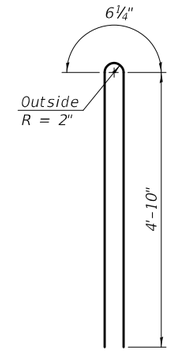
Threaded rods shall be ASTM F 1554 Grade 55.

The G6(E) bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

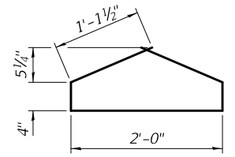
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



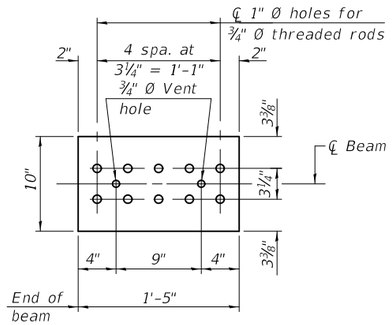

BAR G1(E)



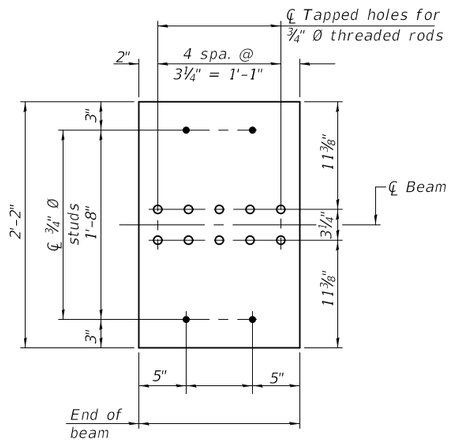

BAR G2(E)




BAR G4(E)

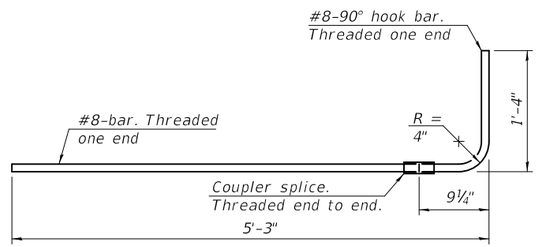



TOP PLATE




BOTTOM PLATE

See bearing details for pintle hole locations when required.



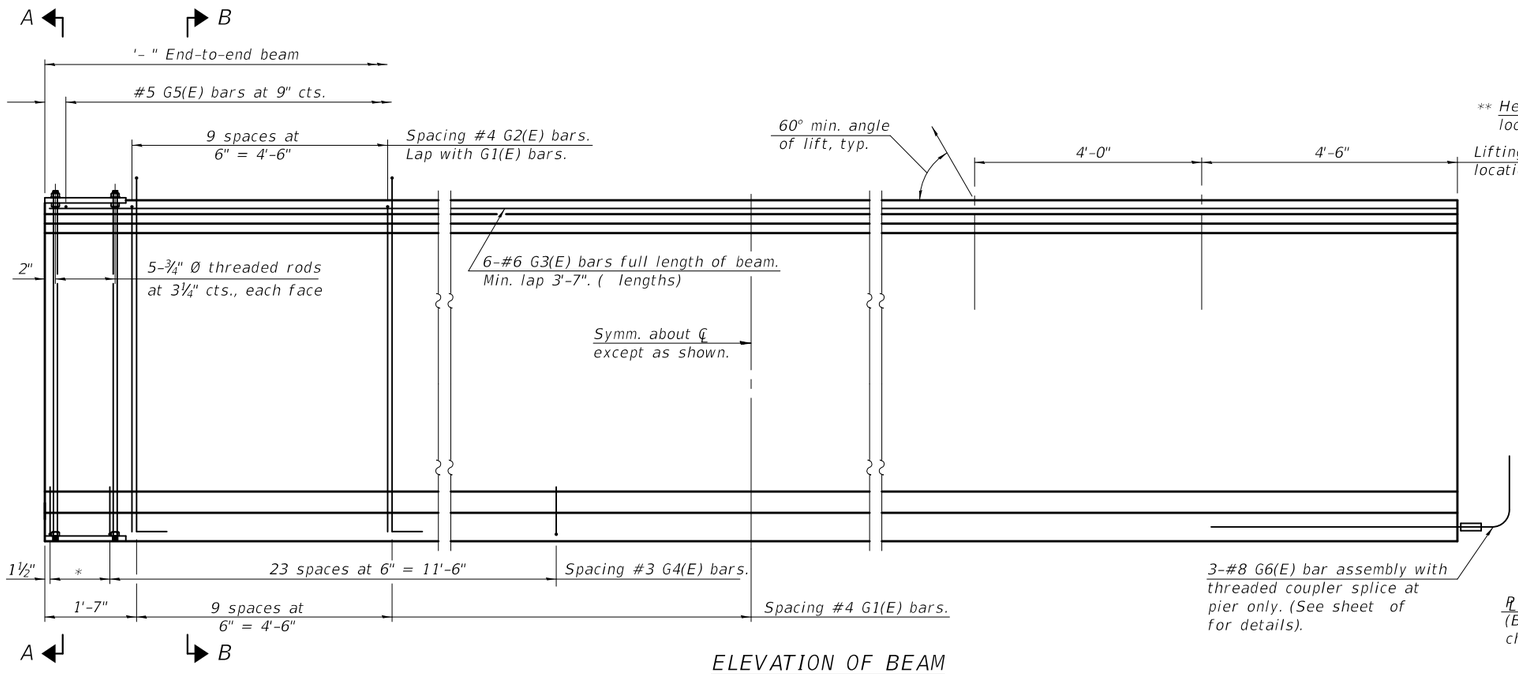

G6(E) BAR ASSEMBLY

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 63" | Ft. | |

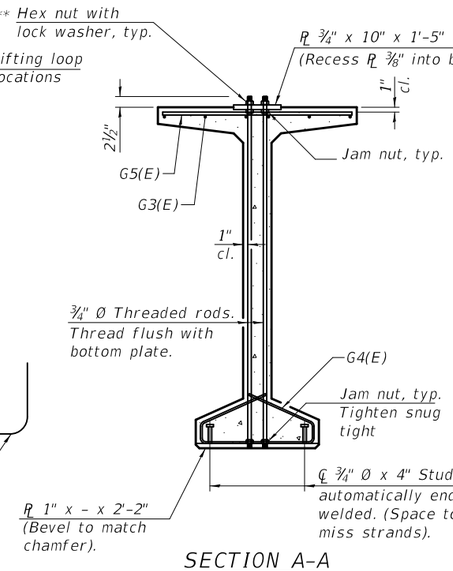
PBT-4-63D 2-17-2017

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | 63" PPC BULB T-BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | CONTRACT NO. |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | ILLINOIS FED. AID PROJECT |
| | PLOT DATE = | CHECKED - | REVISED - | | | | |

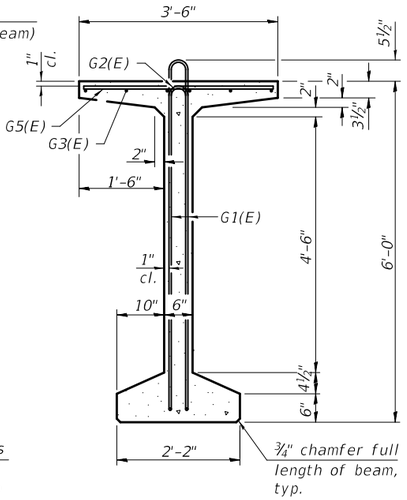



*4 spaces at 3¼" = 1'-1"

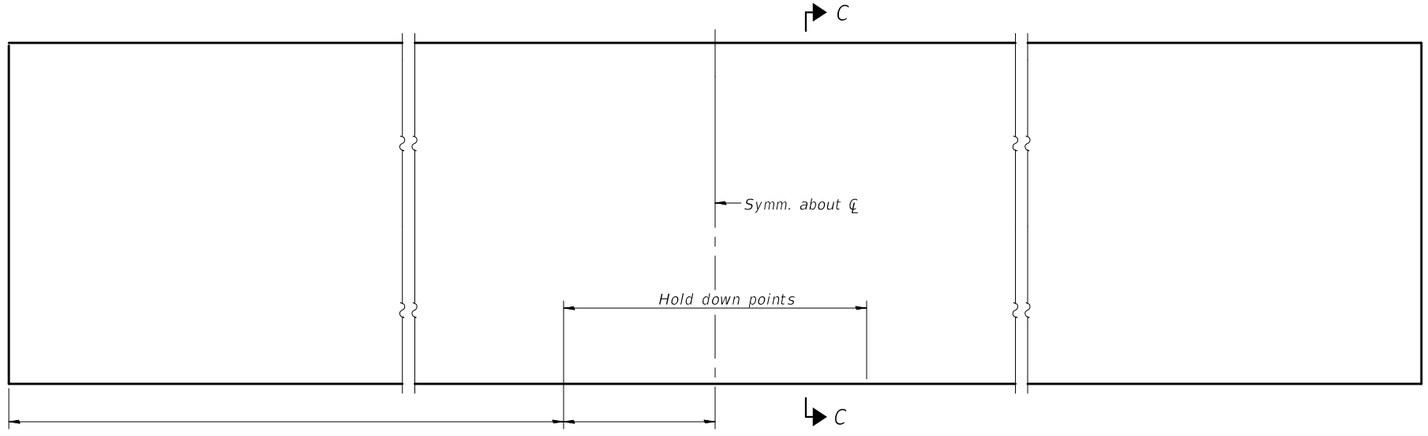
## ELEVATION OF BEAM
(Showing reinforcement & dimensions)



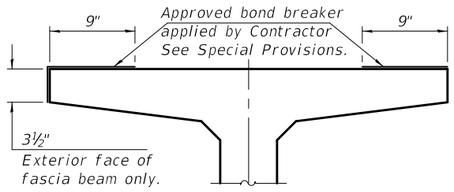

## SECTION A-A
** Only tighten sufficiently to compress lock washers



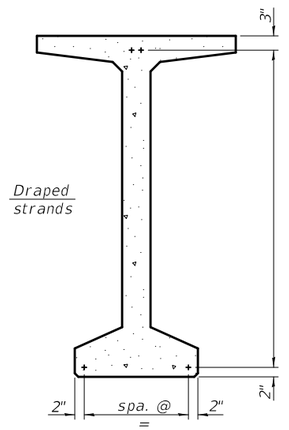

## SECTION B-B




## ELEVATION OF BEAM
(Showing prestressing steel)




## SECTION THRU TOP FLANGE
(Showing limits of bond breaker)




## SECTION C-C
( -½" Ø 270 ksi strands)

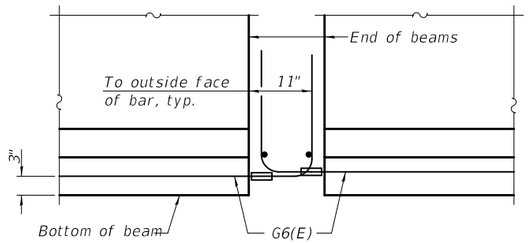
## BAR LIST
## ONE BEAM ONLY
(For information only)

| Bar | No. | Size | Length | Shape |
|---|---|---|---|---|
| G1(E) | | #4 | 13'-7" | |
| G2(E) | | #4 | 11'-8" | |
| G3(E) | | #6 | | |
| G4(E) | | #3 | 4'-11" | |
| G5(E) | | #5 | 3'-4" | |
| G6(E) | | #8 | 6'-6" | |

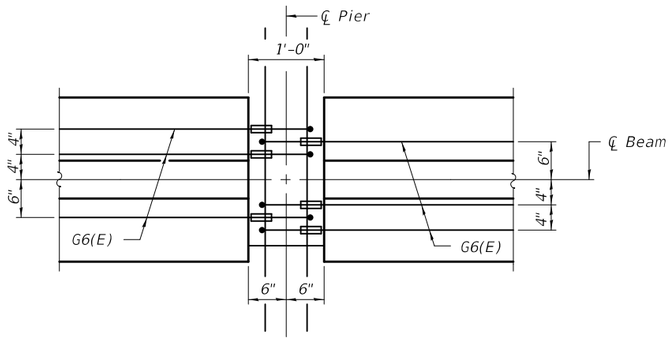
Notes:
See sheet of for additional details and Bill of Material.

PBT-4-72 2-17-2017

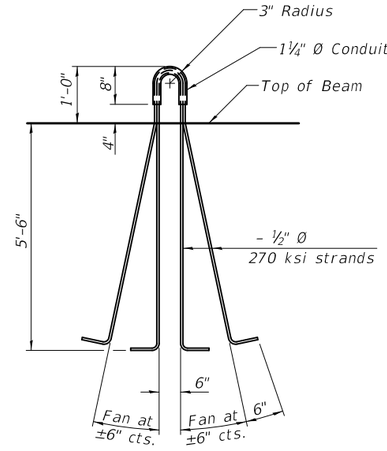
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | 72" PPC BULB T-BEAM STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | CONTRACT NO. |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | ILLINOIS FED. AID PROJECT |
| | PLOT DATE = | CHECKED - | REVISED - | | | | |




ELEVATION OF BEAM AT PIER




PLAN OF BEAM AT PIER




LIFTING LOOP DETAIL

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of psi and a release concrete compressive strength, f'ci, of psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Tilt G6(E) bars when necessary to maintain 1½" clearance.

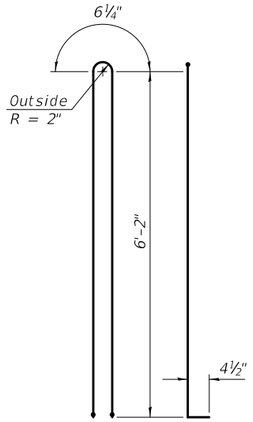
The top and bottom plates shall be AASHTO M270 Grade 50.

The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

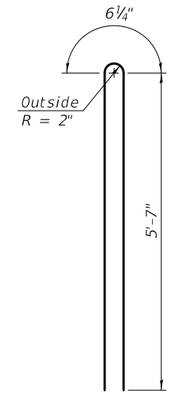
Threaded rods shall be ASTM F 1554 Grade 55.

The G6(E) bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

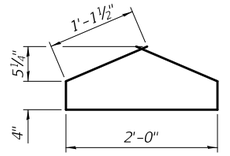
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



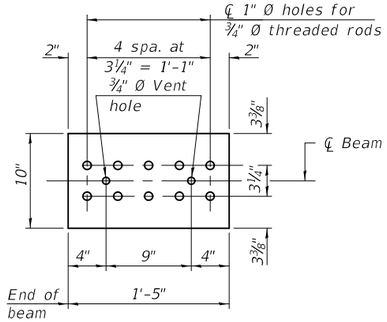

BAR G1(E)



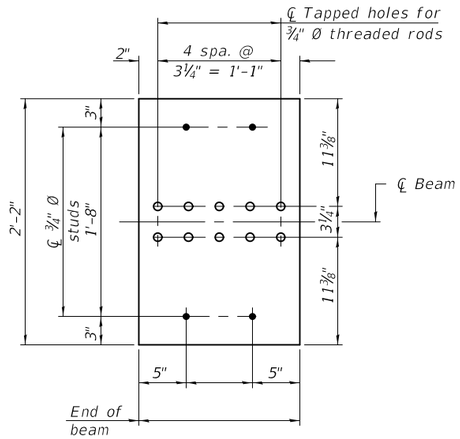

BAR G2(E)




BAR G4(E)

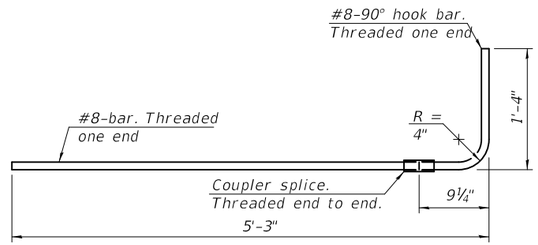



TOP PLATE




BOTTOM PLATE

See bearing details for pintle hole locations when required.



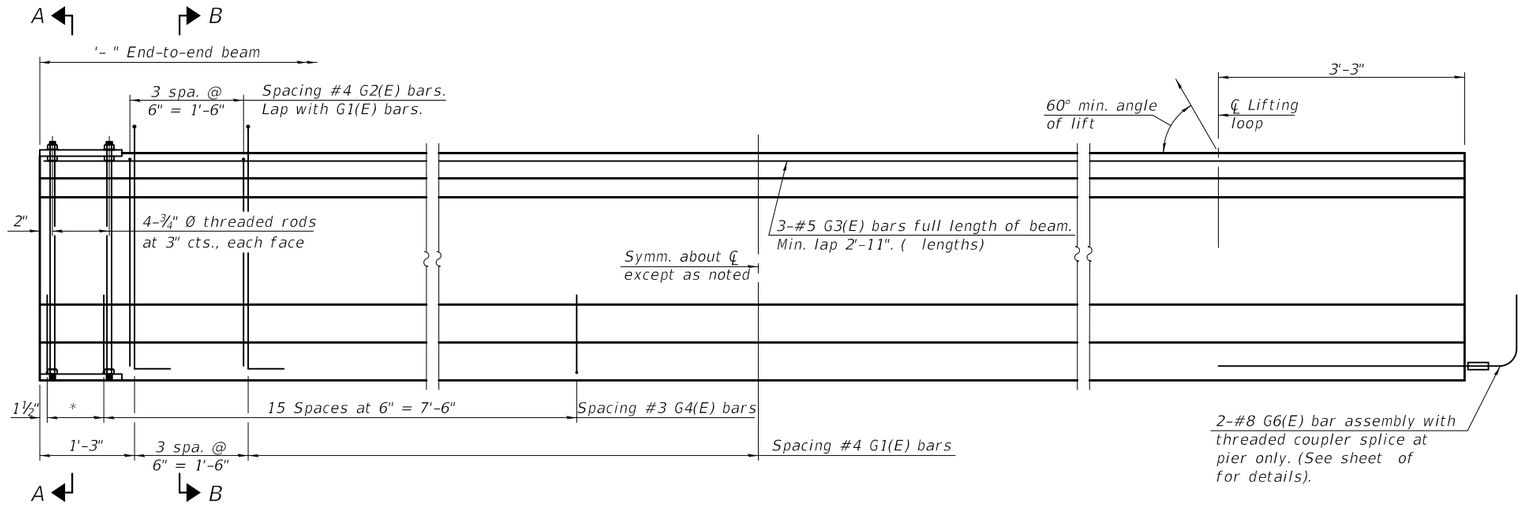

G6(E) BAR ASSEMBLY

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 72" | Ft. | |

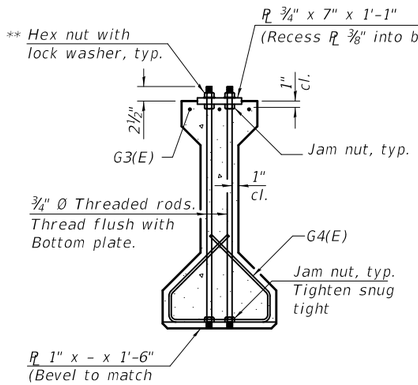
PBT-4-72D 2-17-2017

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | 72" PPC BULB T-BEAM DETAILS STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | CONTRACT NO. |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | ILLINOIS FED. AID PROJECT |
| | PLOT DATE = | CHECKED - | REVISED - | | | | |

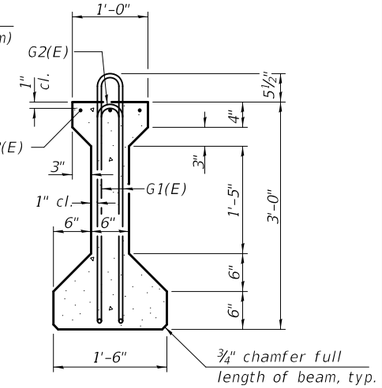



*3 spaces at 3" = 9"

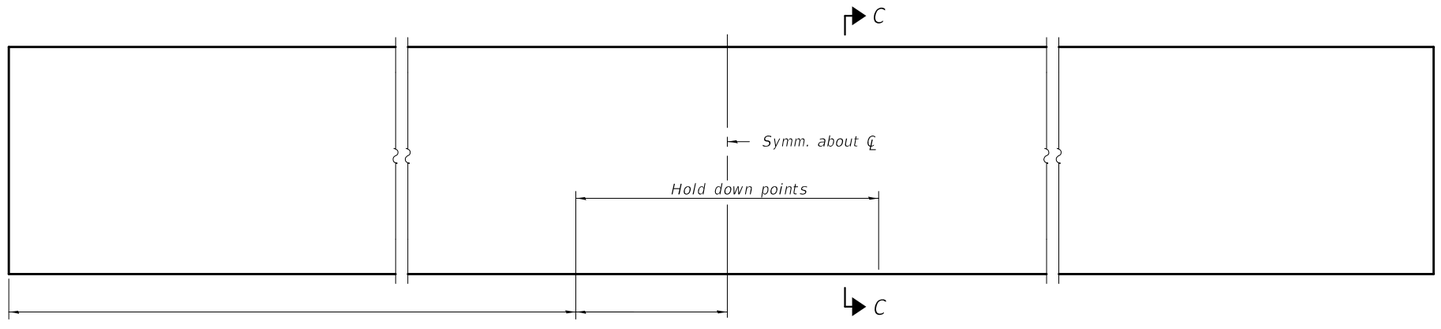
## ELEVATION OF BEAM
(Showing reinforcement & dimensions)



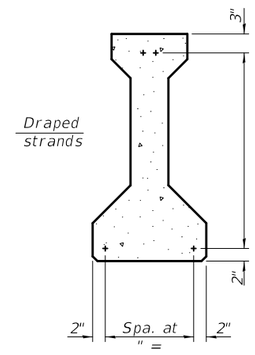

## SECTION A-A
** Only tighten sufficiently to compress lock washers




## SECTION B-B




## ELEVATION OF BEAM
(Showing prestressing steel)




## SECTION C-C
( -½" Ø 270 ksi strands)

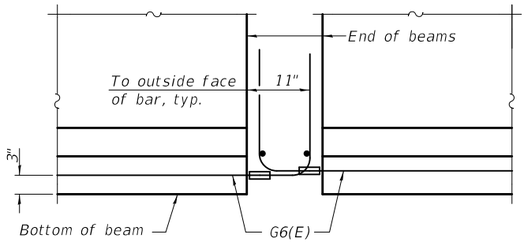
## BAR LIST
## ONE BEAM ONLY
(For information only)

| Bar | No. | Size | Length | Shape |
|---|---|---|---|---|
| G1(E) | | #4 | 7'-7" | ⊓L |
| G2(E) | | #4 | 5'-8" | ⊓ |
| G3(E) | | #5 | | —— |
| G4(E) | | #3 | 4'-1" | ⌓ |
| | | | | |
| G6(E) | | #8 | 6'-6" | ⌒ |

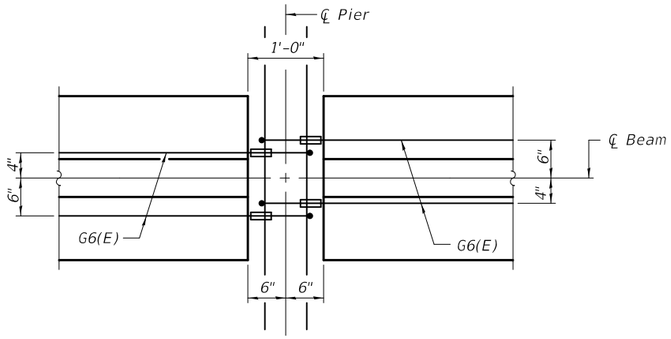
Notes:
See sheet of for additional details and Bill of Material.

PI-4-36 2-17-2017

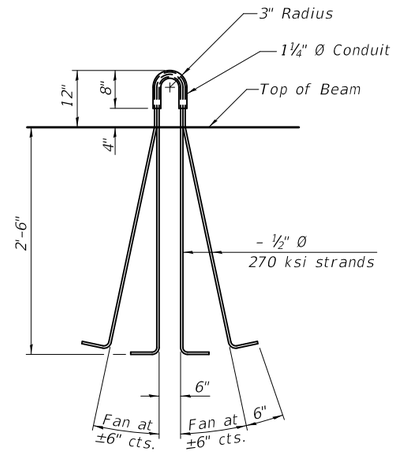
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | 36" PPC I-BEAM STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | CONTRACT NO. |
| | PLOT DATE = | CHECKED - | REVISED - | | | | ILLINOIS FED. AID PROJECT |




ELEVATION OF BEAM AT PIER




PLAN OF BEAM AT PIER




LIFTING LOOP DETAIL

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of psi and a release concrete compressive strength, f'ci, of psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Tilt G6(E) bars when necessary to maintain 1½" clearance.

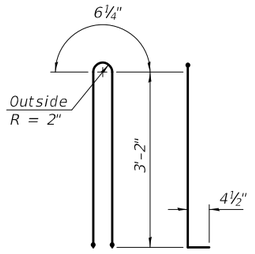
The top and bottom plates shall be AASHTO M270 Grade 50.

The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

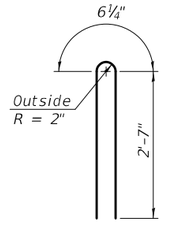
Threaded rods shall be ASTM F 1554 Grade 55.

The G6(E) bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

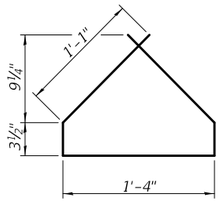
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



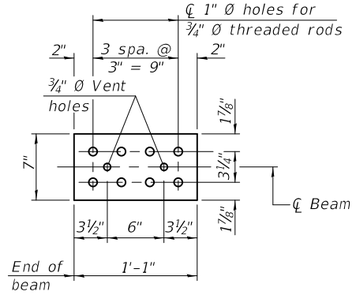

BAR G1(E)



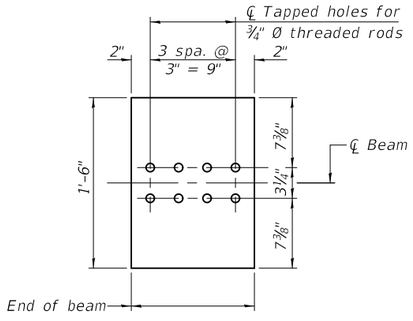

BAR G2(E)




BAR G4(E)

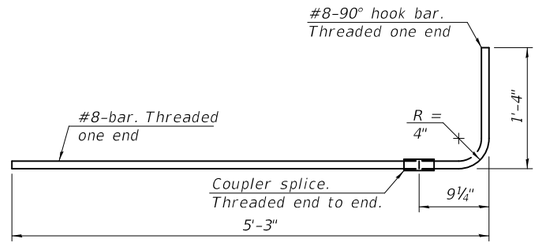



TOP PLATE




BOTTOM PLATE

See bearing details for pintle hole locations when required.




G6(E) BAR ASSEMBLY

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36" | Ft. | |

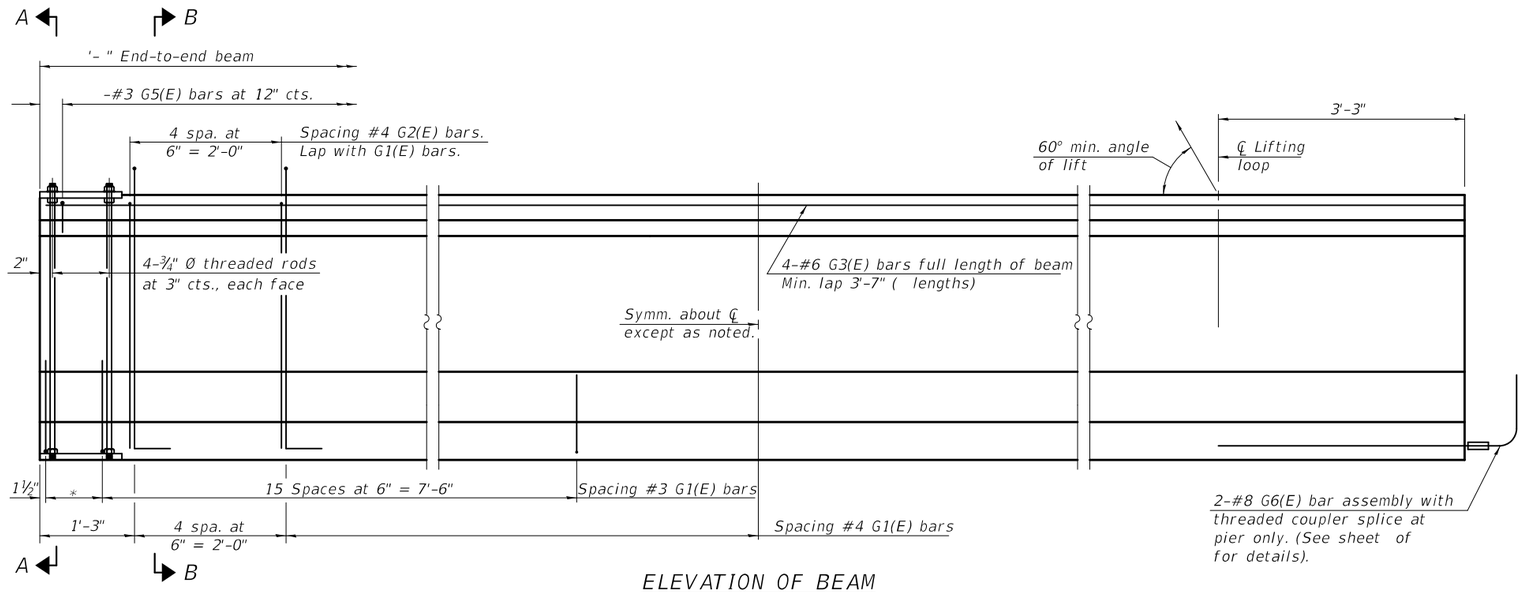
PI-4-36D 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

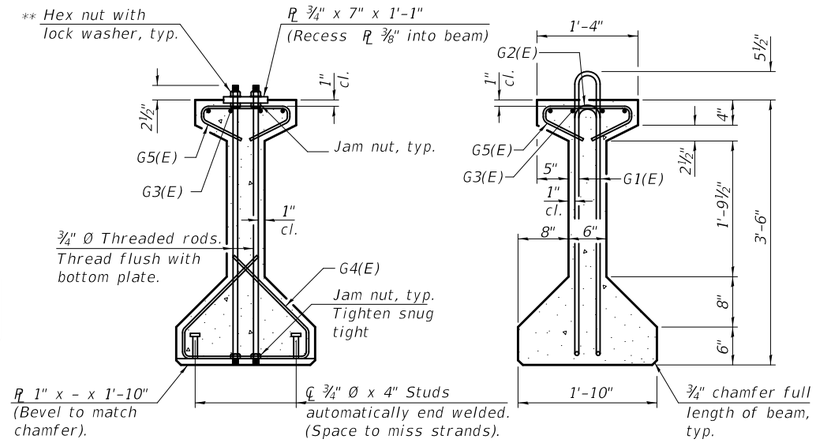
**36" PPC I-BEAM DETAILS**
**STRUCTURE NO.**

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS FED. AID PROJECT | | | |



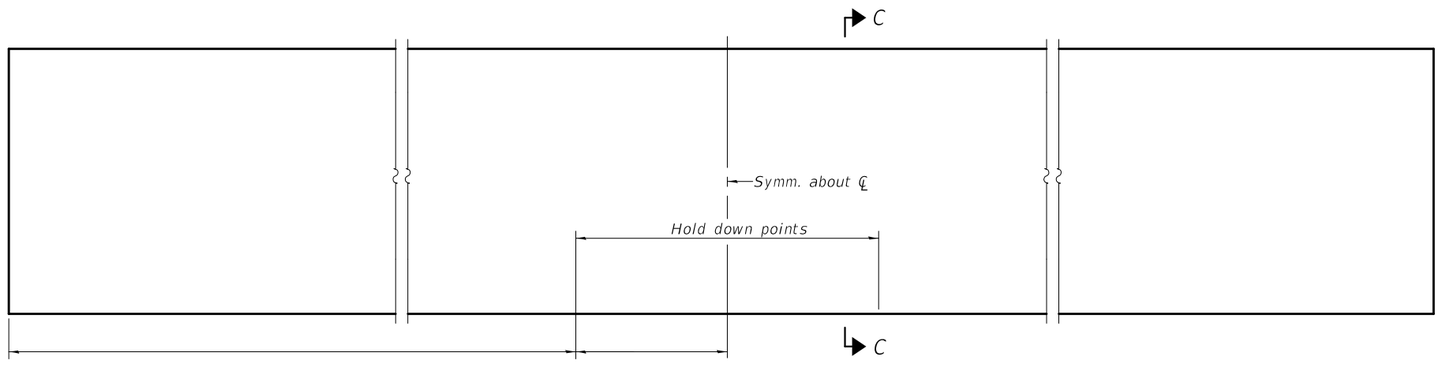

*3 spaces at 3" = 9"

## ELEVATION OF BEAM
(Showing reinforcement & dimensions)

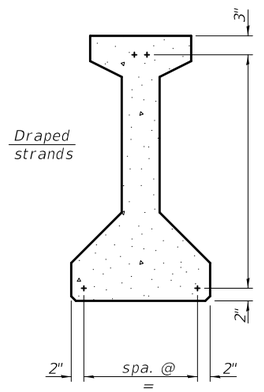



## SECTION A-A
**Only tighten sufficiently to compress lock washers

## SECTION B-B




## ELEVATION OF BEAM
(Showing prestressing steel)




## SECTION C-C
( -½" Ø 270 ksi strands)

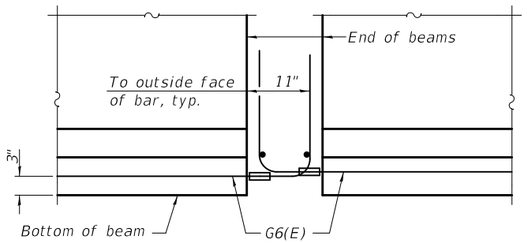
## BAR LIST
## ONE BEAM ONLY
(For information only)

| Bar | No. | Size | Length | Shape |
|---|---|---|---|---|
| G1(E) | | #4 | 8'-7" | |
| G2(E) | | #4 | 6'-8" | |
| G3(E) | | #6 | | |
| G4(E) | | #3 | 4'-11" | |
| G5(E) | | #3 | 2'-6" | |
| G6(E) | | #8 | 6'-6" | |

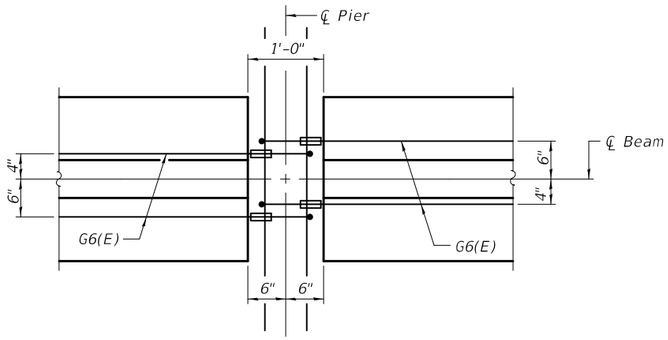
Notes:
See sheet of for additional details and Bill of Material.

PI-4-42 2-17-2017

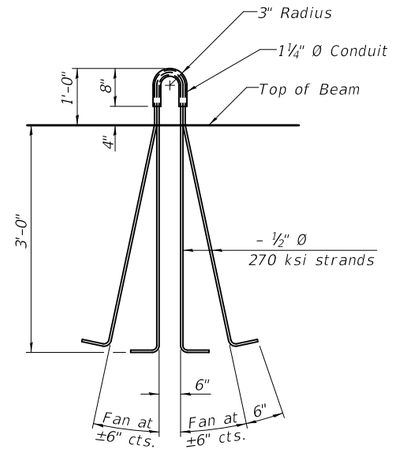
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | 42" PPC I-BEAM STRUCTURE NO. | F.A. RTE. | SECTION / COUNTY / TOTAL SHEETS / SHEET NO. |
| | | CHECKED - | REVISED - | | | | |
| | PLOT SCALE = | DRAWN - | REVISED - | | | | CONTRACT NO. |
| | PLOT DATE = | CHECKED - | REVISED - | | | | ILLINOIS FED. AID PROJECT |




ELEVATION OF BEAM AT PIER




PLAN OF BEAM AT PIER




LIFTING LOOP DETAIL

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of -- psi and a release concrete compressive strength, f'ci, of -- psi.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Tilt G6(E) bars when necessary to maintain 1½" clearance.

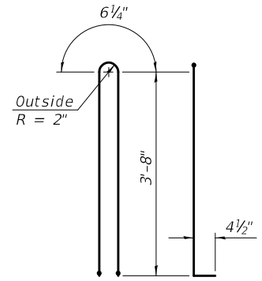
The top and bottom plates shall be AASHTO M270 Grade 50.

The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

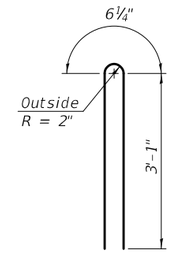
Threaded rods shall be ASTM F 1554 Grade 55.

The G6(E) bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

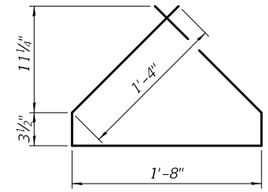
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



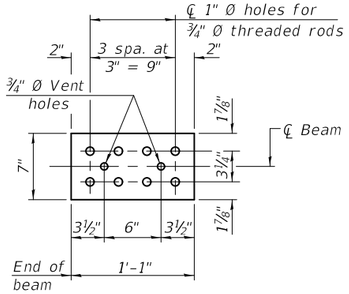

BAR G1(E)



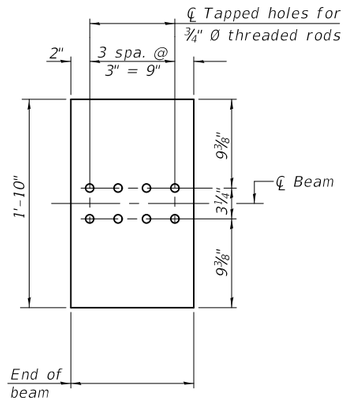

BAR G2(E)



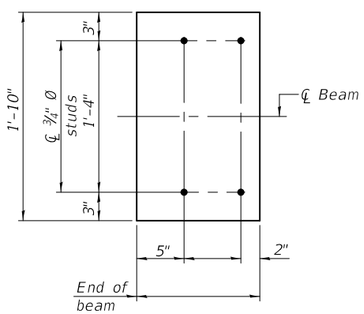

BAR G4(E)




TOP PLATE

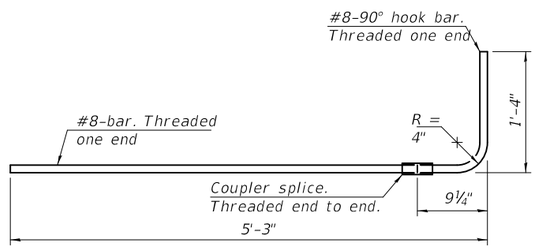



BOTTOM PLATE
(Showing threaded rods)

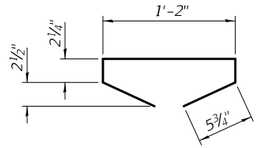



BOTTOM PLATE
(Showing studs)

See bearing details for pintle hole locations when required.




G6(E) BAR ASSEMBLY




BAR G5(E)

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42" | Ft. | |

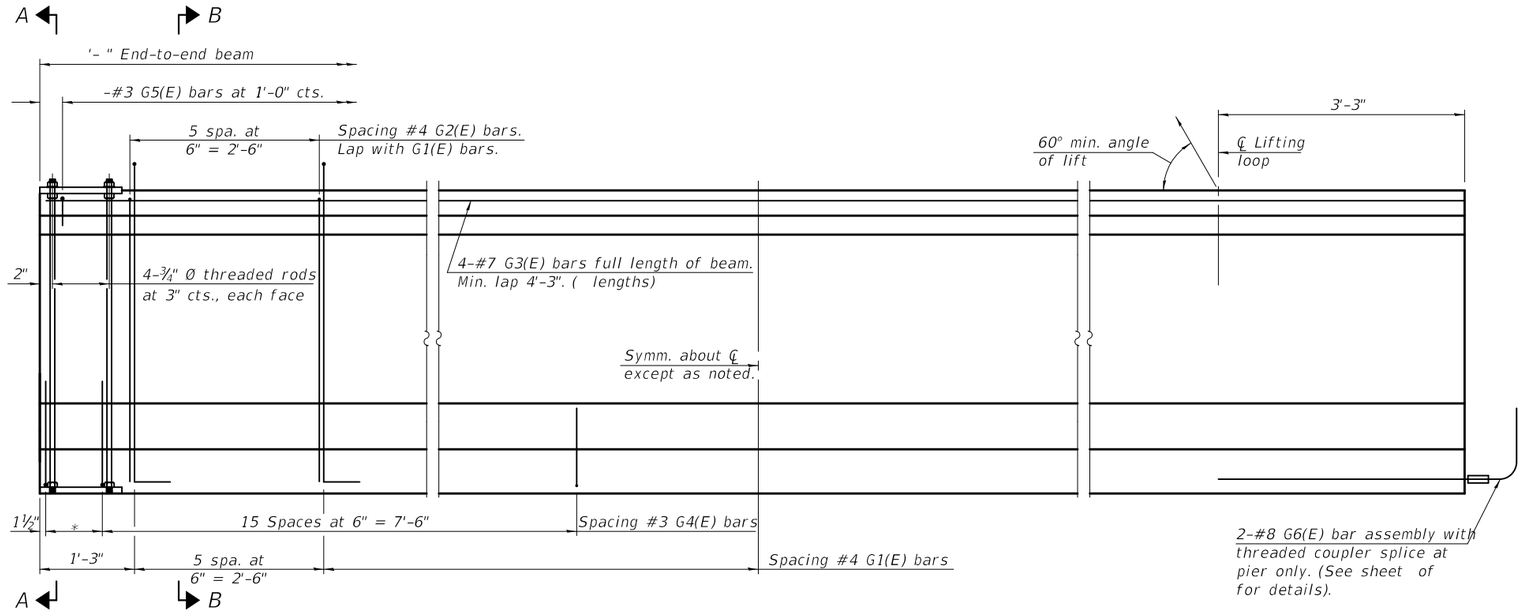
PI-4-42D 2-17-2017

| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
|---|---|---|---|
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

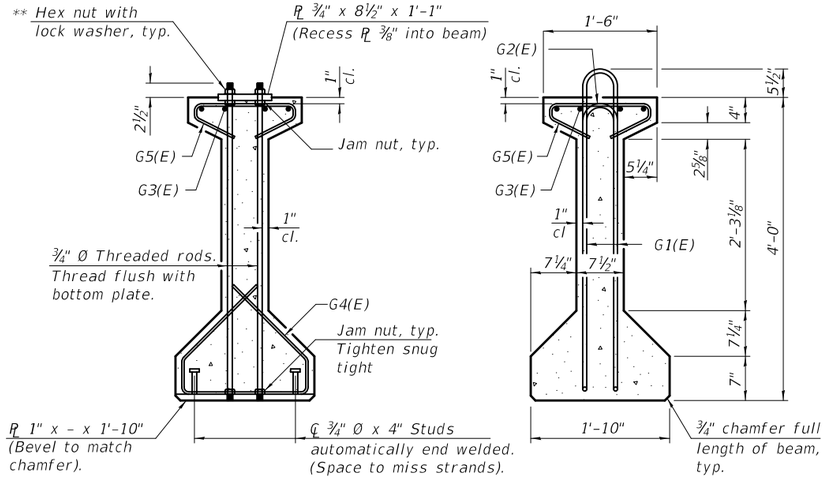
**42" PPC I-BEAM DETAILS**
**STRUCTURE NO.**

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |



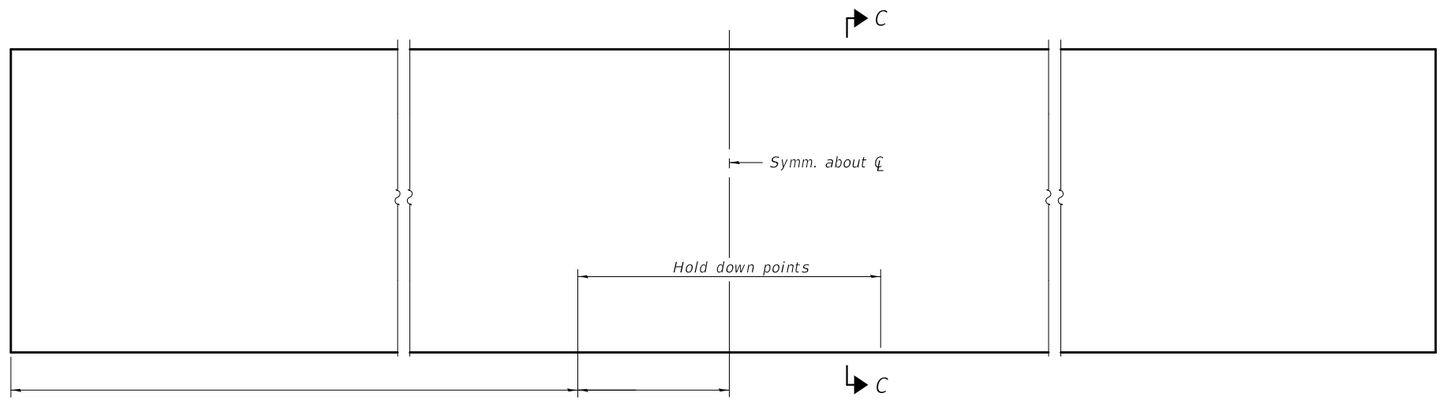

*3 spaces at 3" = 9"

## ELEVATION OF BEAM
(Showing reinforcement & dimensions)

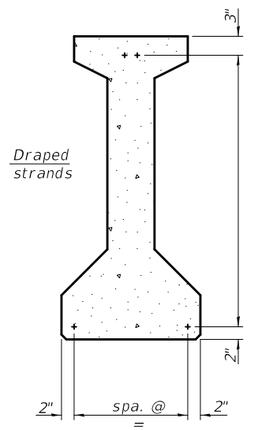



## SECTION A-A
** Only tighten sufficiently to compress lock washers

## SECTION B-B




## ELEVATION OF BEAM
(Showing prestressing steel)




## SECTION C-C
( -½" Ø 270 ksi strands)

## BAR LIST
## ONE BEAM ONLY
(For information only)

| Bar | No. | Size | Length | Shape |
|---|---|---|---|---|
| G1(E) | | #4 | 9'-8" | |
| G2(E) | | #4 | 7'-11" | |
| G3(E) | | #7 | | |
| G4(E) | | #3 | 5'-3" | |
| G5(E) | | #3 | 2'-9" | |
| G6(E) | | #8 | 6'-6" | |

Notes:
See sheet of for additional details and Bill of Material.

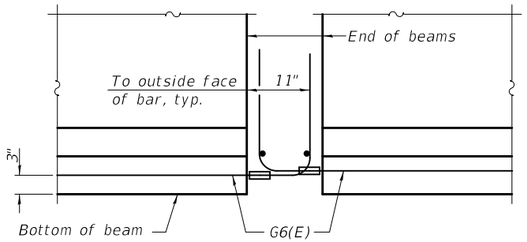
PI-4-48 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

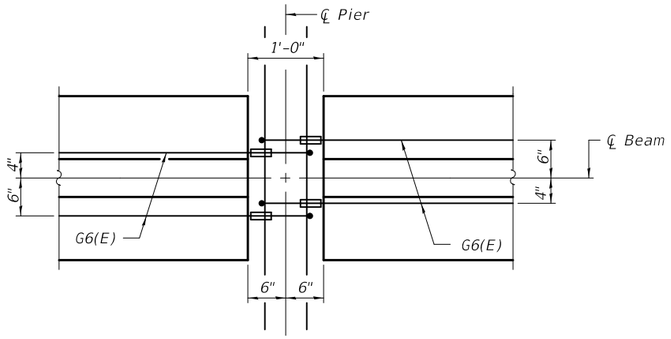
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**48" PPC I-BEAM**
**STRUCTURE NO.**

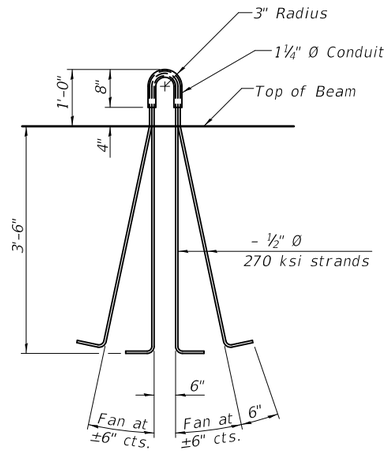
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |




ELEVATION OF BEAM AT PIER




PLAN OF BEAM AT PIER




LIFTING LOOP DETAIL

## NOTES

Inserts for ¾" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

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The top and bottom plates shall be AASHTO M270 Grade 50.

The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

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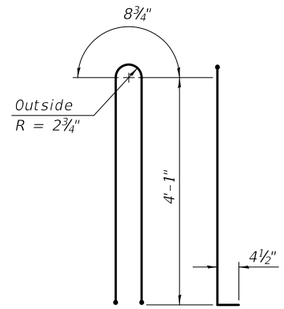
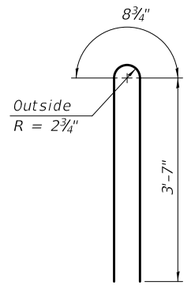
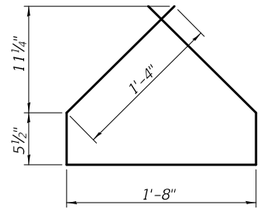
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



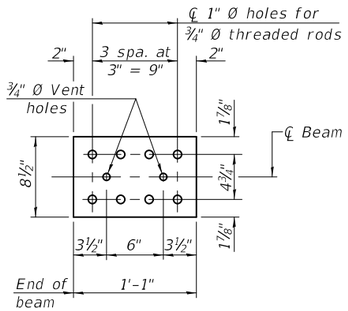

BAR G1(E)



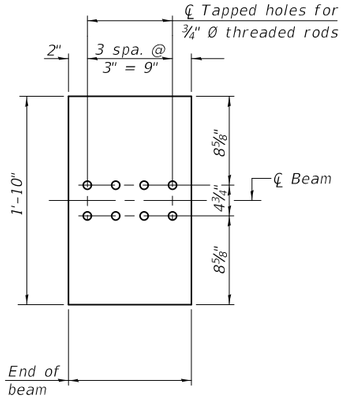

BAR G2(E)



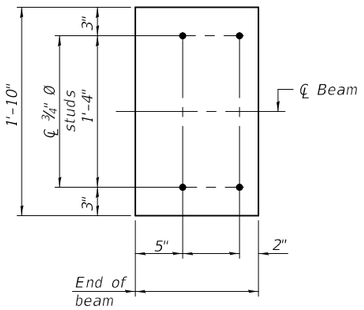

BAR G4(E)




TOP PLATE

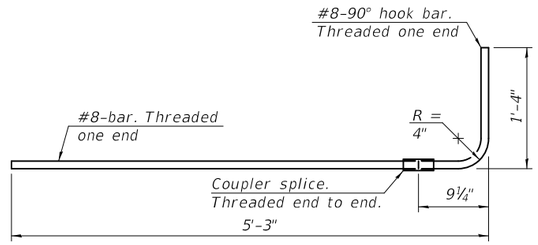



BOTTOM PLATE
(Showing threaded rods)

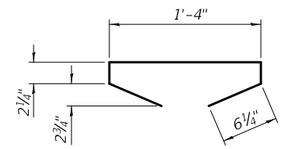



BOTTOM PLATE
(Showing studs)

See bearing details for pintle hole locations when required.




G6(E) BAR ASSEMBLY




BAR G5(E)

## BILL OF MATERIAL

| Item | Unit | Total |
|---|---|---|
| Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48" | Ft. | |

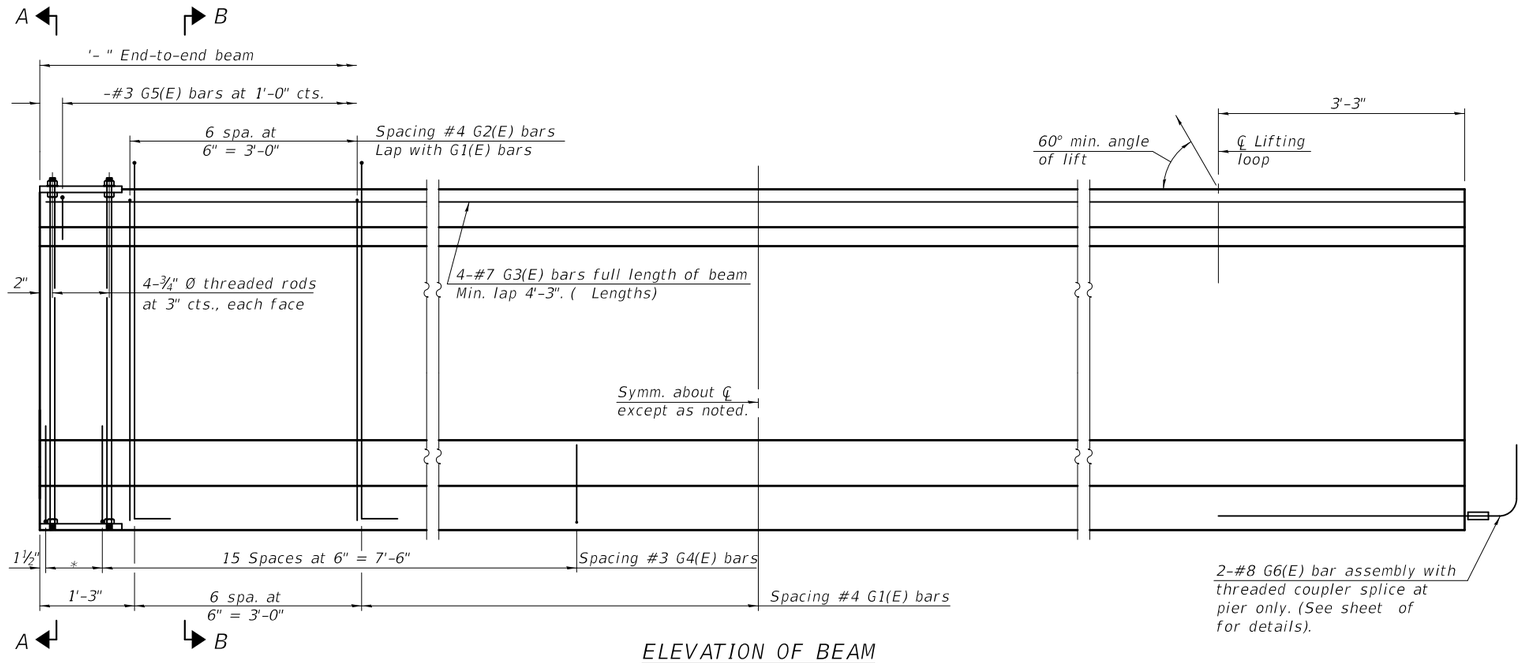
PI-4-48D 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

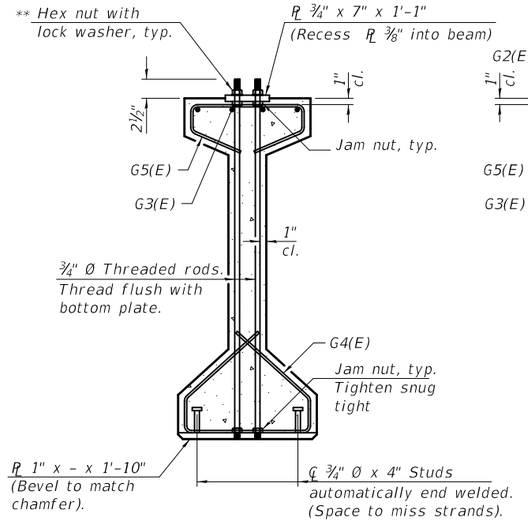
**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**48" PPC I-BEAM DETAILS**
**STRUCTURE NO.**

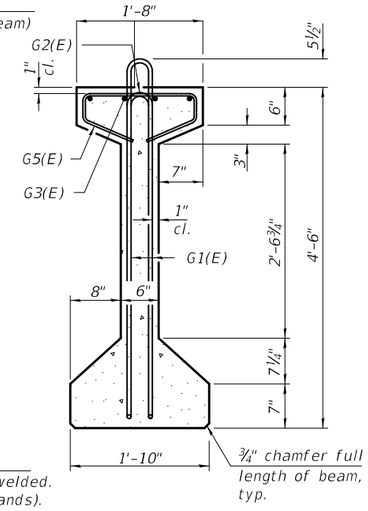
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS FED. AID PROJECT | | | |




## ELEVATION OF BEAM
(Showing reinforcement & dimensions)




## SECTION A-A
** Only tighten sufficiently to compress lock washers

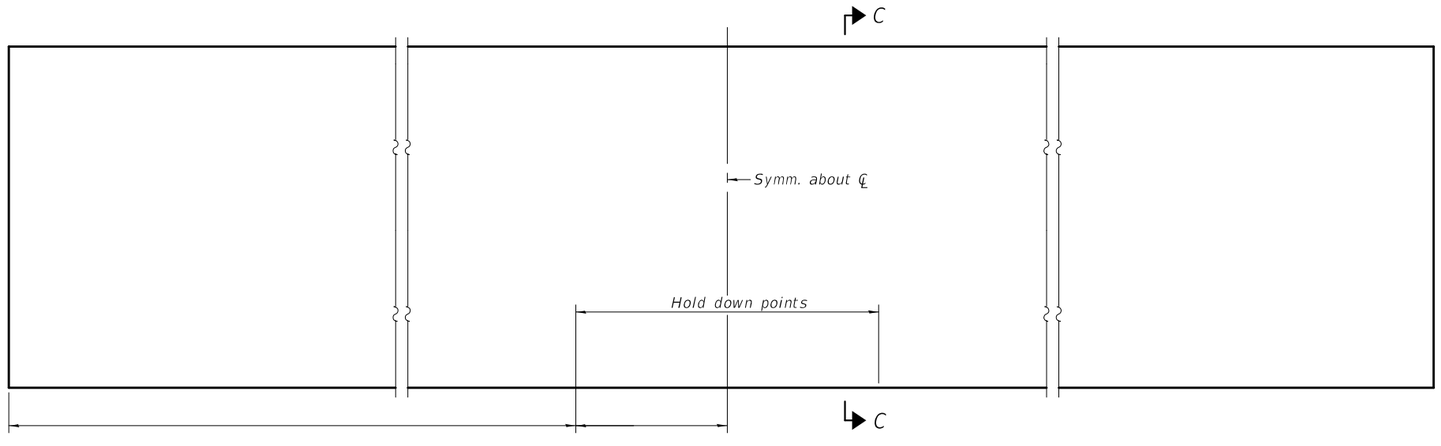



## SECTION B-B

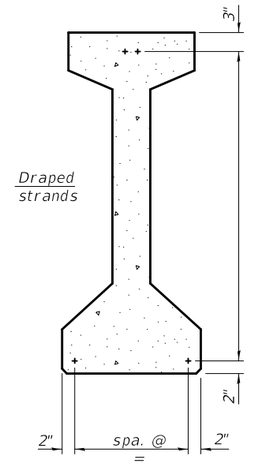
## BAR LIST
## ONE BEAM ONLY
(For information only)

| Bar | No. | Size | Length | Shape |
|---|---|---|---|---|
| G1(E) | | #4 | 10'-7" | |
| G2(E) | | #4 | 8'-8" | |
| G3(E) | | #7 | | |
| G4(E) | | #3 | 4'-11" | |
| G5(E) | | #3 | 3'-5" | |
| G6(E) | | #8 | 6'-6" | |

Notes:
See sheet of for additional details and Bill of Material.




## ELEVATION OF BEAM
(Showing prestressing steel)




## SECTION C-C
( -½" Ø 270 ksi strands)

PI-4-54 2-17-2017

| | | | |
|---|---|---|---|
| FILE NAME = | USER NAME = | DESIGNED - | REVISED - |
| | | CHECKED - | REVISED - |
| | PLOT SCALE = | DRAWN - | REVISED - |
| | PLOT DATE = | CHECKED - | REVISED - |

**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**54" PPC I-BEAM**
**STRUCTURE NO.**

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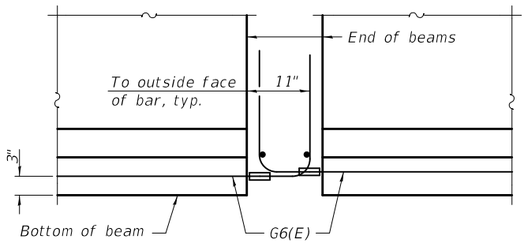
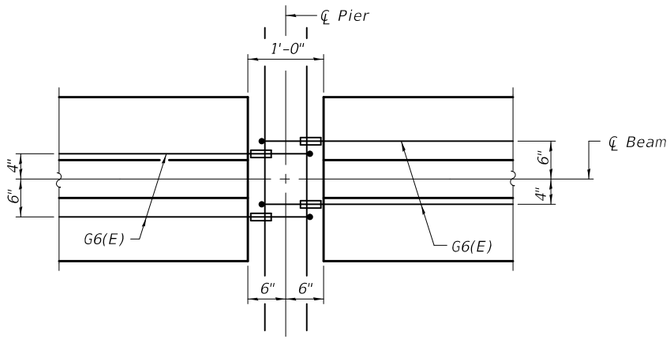
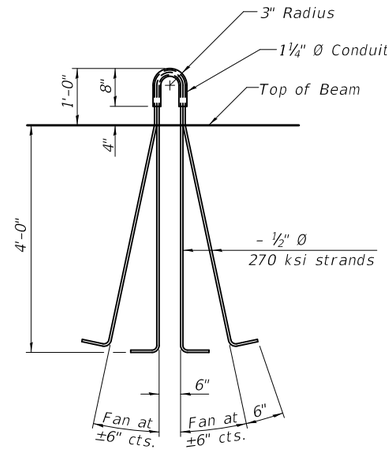



ELEVATION OF BEAM AT PIER




PLAN OF BEAM AT PIER




LIFTING LOOP DETAIL

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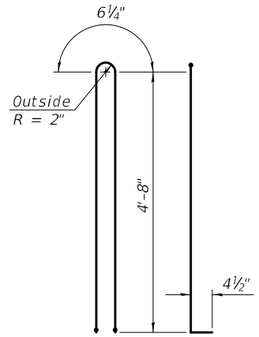
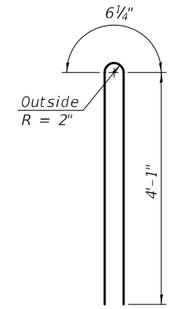
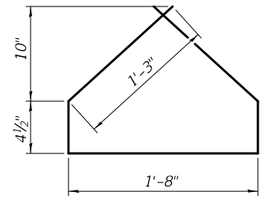


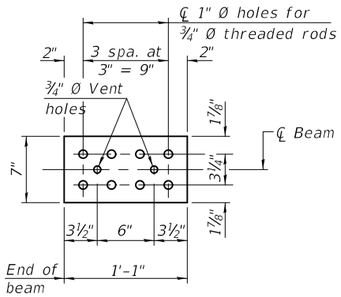

BAR G1(E)



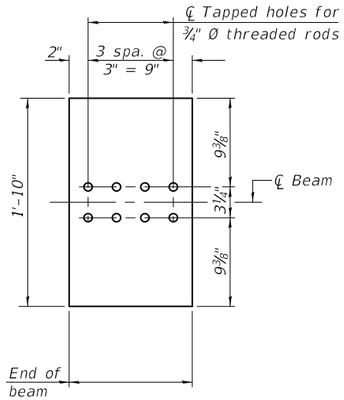

BAR G2(E)



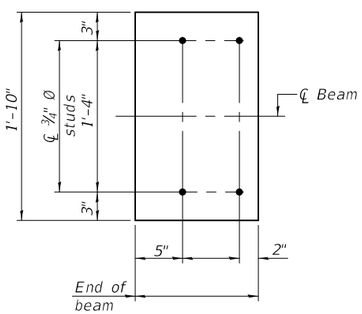

BAR G4(E)



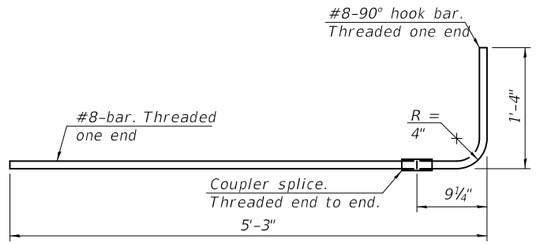

TOP PLATE



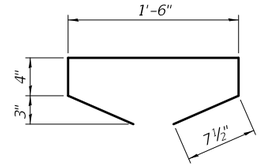

BOTTOM PLATE
(Showing threaded rods)




BOTTOM PLATE
(Showing studs)




G6(E) BAR ASSEMBLY




BAR G5(E)

See bearing details for pintle hole locations when required.

## BILL OF MATERIAL

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PI-4-54D 2-17-2017

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**STATE OF ILLINOIS**
**DEPARTMENT OF TRANSPORTATION**

**54" PPC I-BEAM DETAILS**
**STRUCTURE NO.**

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| | | | | |
| | | CONTRACT NO. | | |
| | ILLINOIS | FED. AID PROJECT | | |